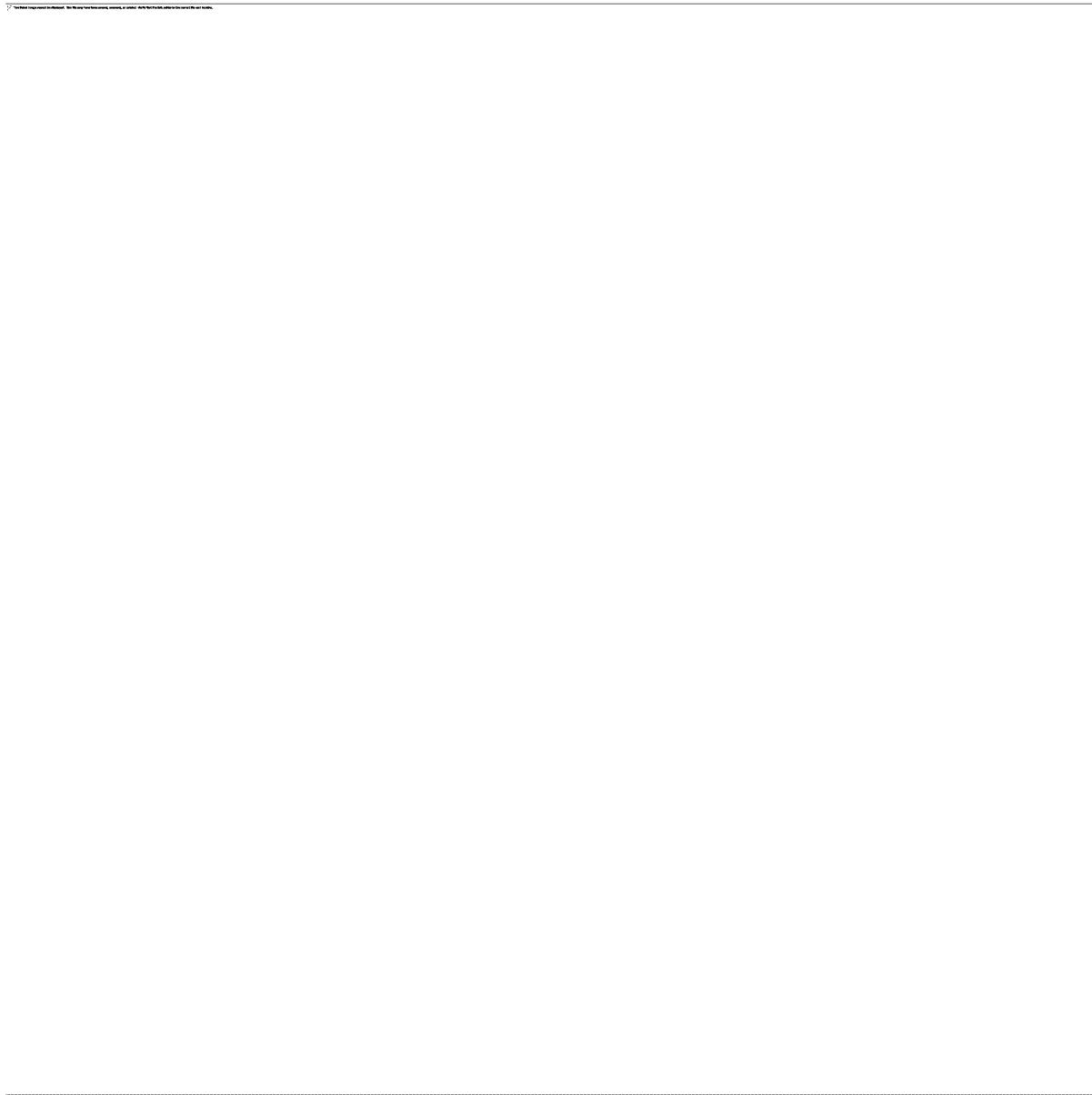


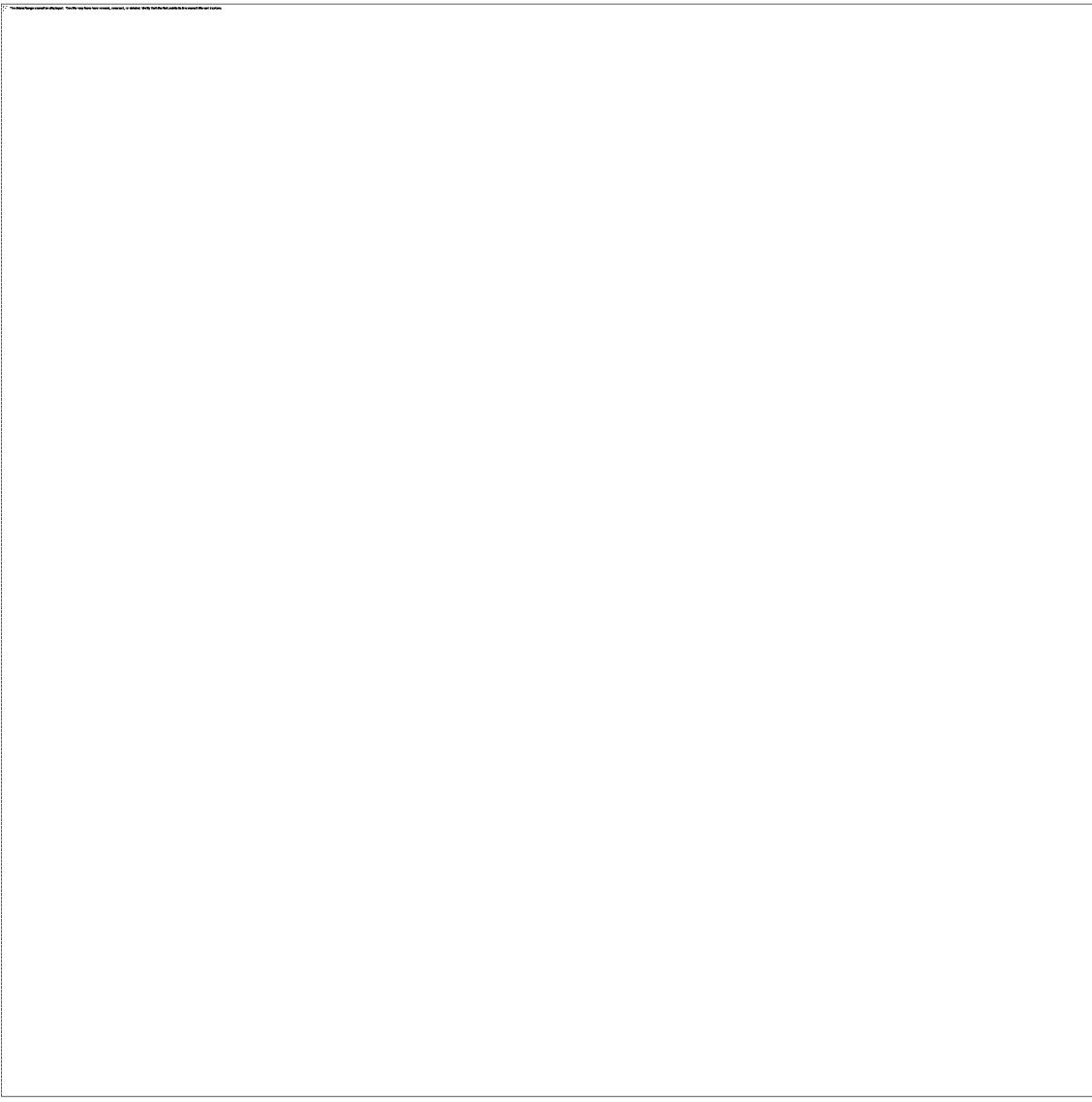
Message

From: NASEM Earth and Life Studies [DELS@nas.edu]
Sent: 4/15/2021 2:59:59 PM
To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: Join us TODAY for a conversation about the social cost of carbon and equitable climate policy in the United States

Join us TODAY for a conversation about the social cost of carbon and equitable climate policy in the United States

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Climate Conversations: The Cost of Carbon

April 15, 2021 | 3:00-4:00 PM ET

Join us for a conversation about the social cost of carbon and equitable climate policy in the United States.

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

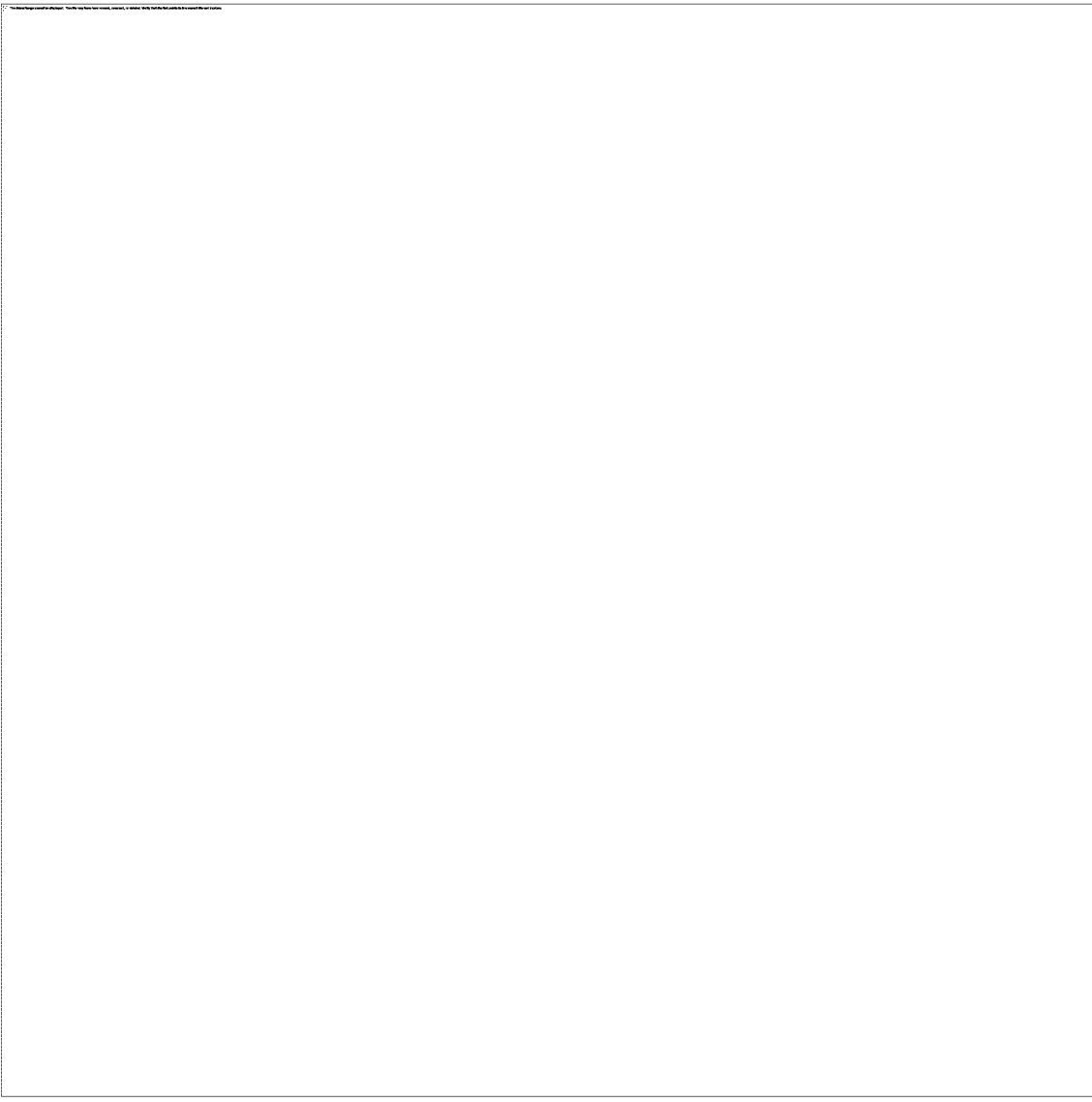
[Register to Attend](#)

The event will be webcast on the [Climate Conversations webpage](#), which also includes participant biographies. Closed captioning will be provided.

Contact Us

If you have any questions about the Climate Conversations: Pathways to Action monthly webinar series, please contact Alex Reich at areich@nas.edu.

Upcoming Related Events



Climate Conversations: Solar Geoengineering

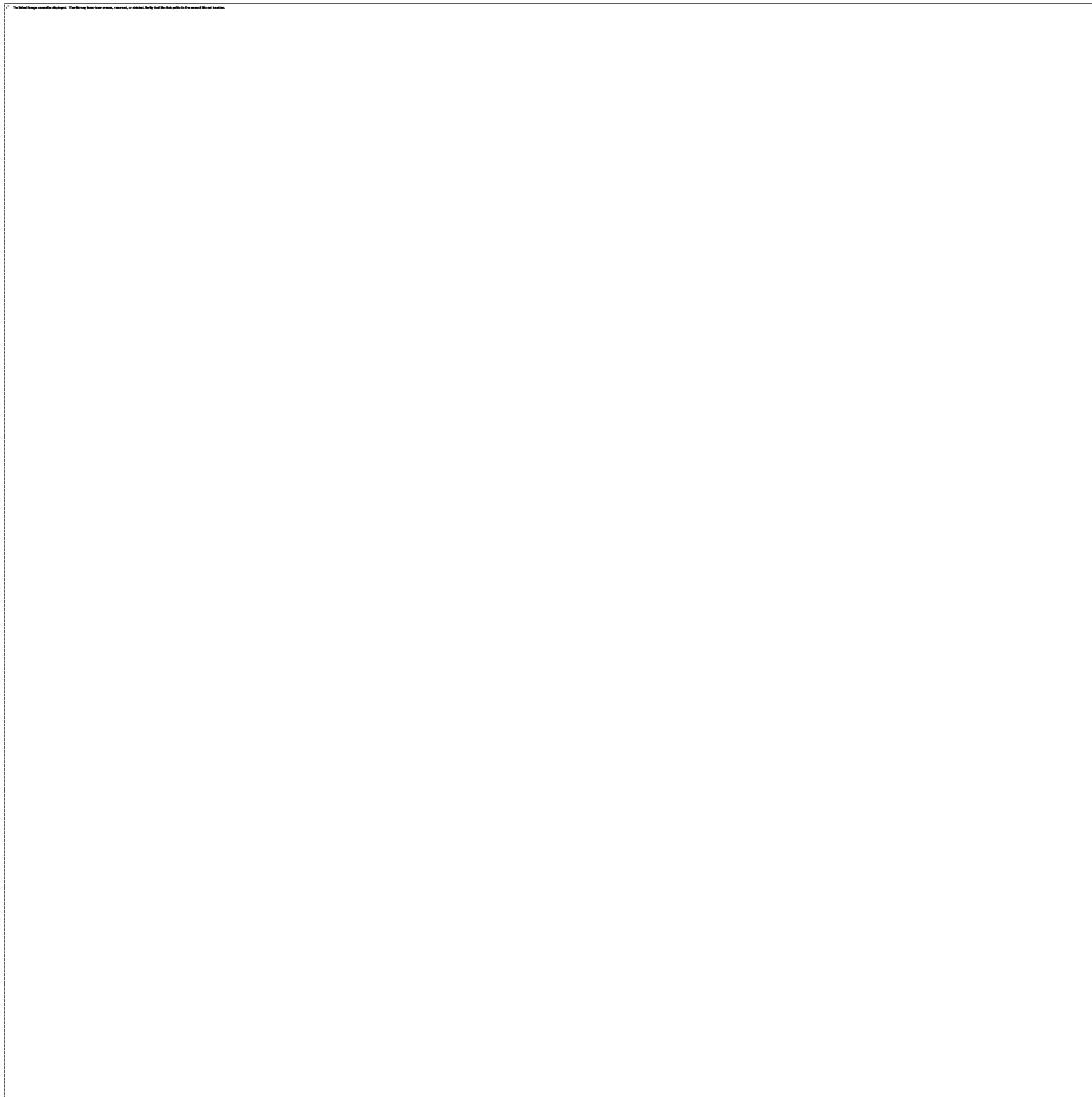
May 20, 2021 | 3:00-4:00 PM ET

Join us for a conversation on the possible risks and benefits of solar geoengineering as part of a portfolio of responses to climate change.

Solar geoengineering refers to a set of possible strategies to help reduce global warming by increasing the amount of solar radiation reflected away from Earth. Frank Sesno (George Washington University) will moderate a conversation with Marcia McNutt (National Academy of Sciences) and Chris Field (Stanford University) about how and whether solar geoengineering should fit into broader efforts to address climate change, the role of research in helping inform decisions about implementation, and the complex global ethics and governance issues associated with solar geoengineering. The webinar will include a discussion of the new National Academies report, *Reflecting Sunlight: Recommendations*

for Solar Geoengineering Research and Research Governance, which was chaired by Dr. Field.

[Register to Attend](#)



April 26-28, 2021

Inspired by Alfred Nobel's belief in celebrating achievements that contribute "the greatest benefit to humankind," the Nobel Foundation, the U.S. National Academy of Sciences, and the Potsdam Institute for Climate Impact Research/Stockholm Resilience Centre invite you to engage in an optimistic exploration of the best version of our collective future. The first Nobel Prize Summit will convene talks from Nobel laureates and conversations among experts from the science, policy, arts, and youth activist communities.

Visit our website nobelprize.org/our-planet-our-future to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and register for the virtual event.

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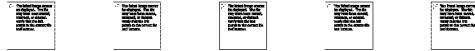
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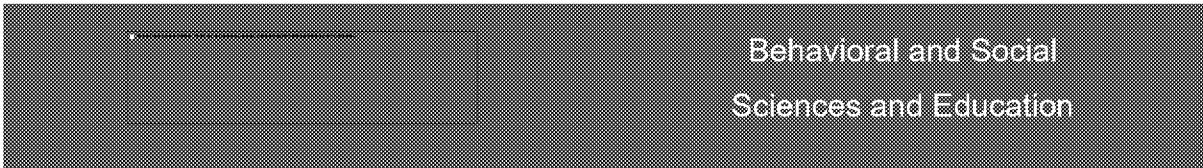
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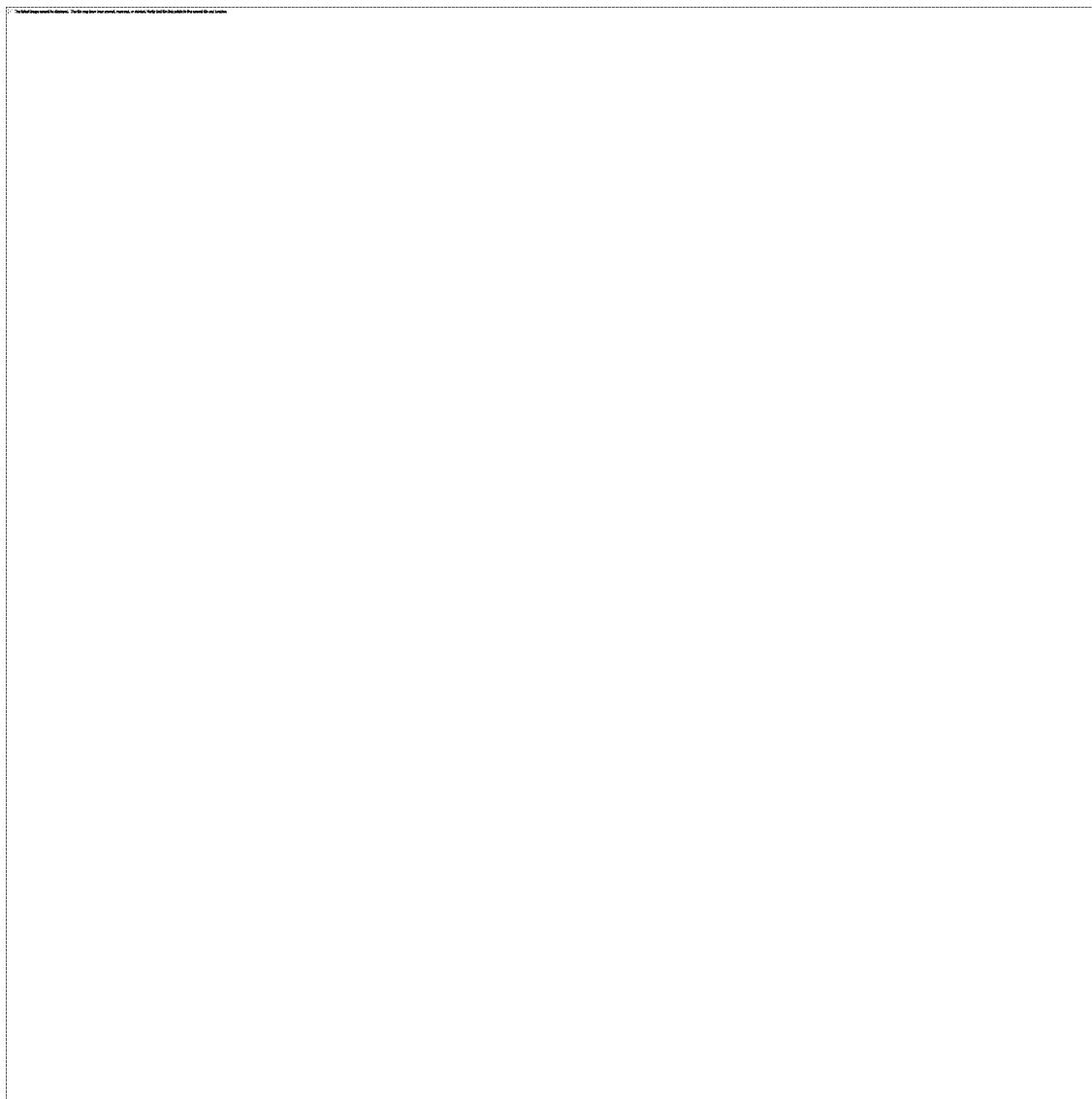
From: NASEM Division of Behavioral and Social Sciences and Education [NASEM_DBASSE@nas.edu]
Sent: 4/12/2021 1:29:39 PM
To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: Register Now: Apr. 15- Climate Conversations: The Cost of Carbon

Register Now: Apr. 15- Climate Conversations: The Cost of Carbon



Behavioral and Social
Sciences and Education

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Climate Conversations: The Cost of Carbon

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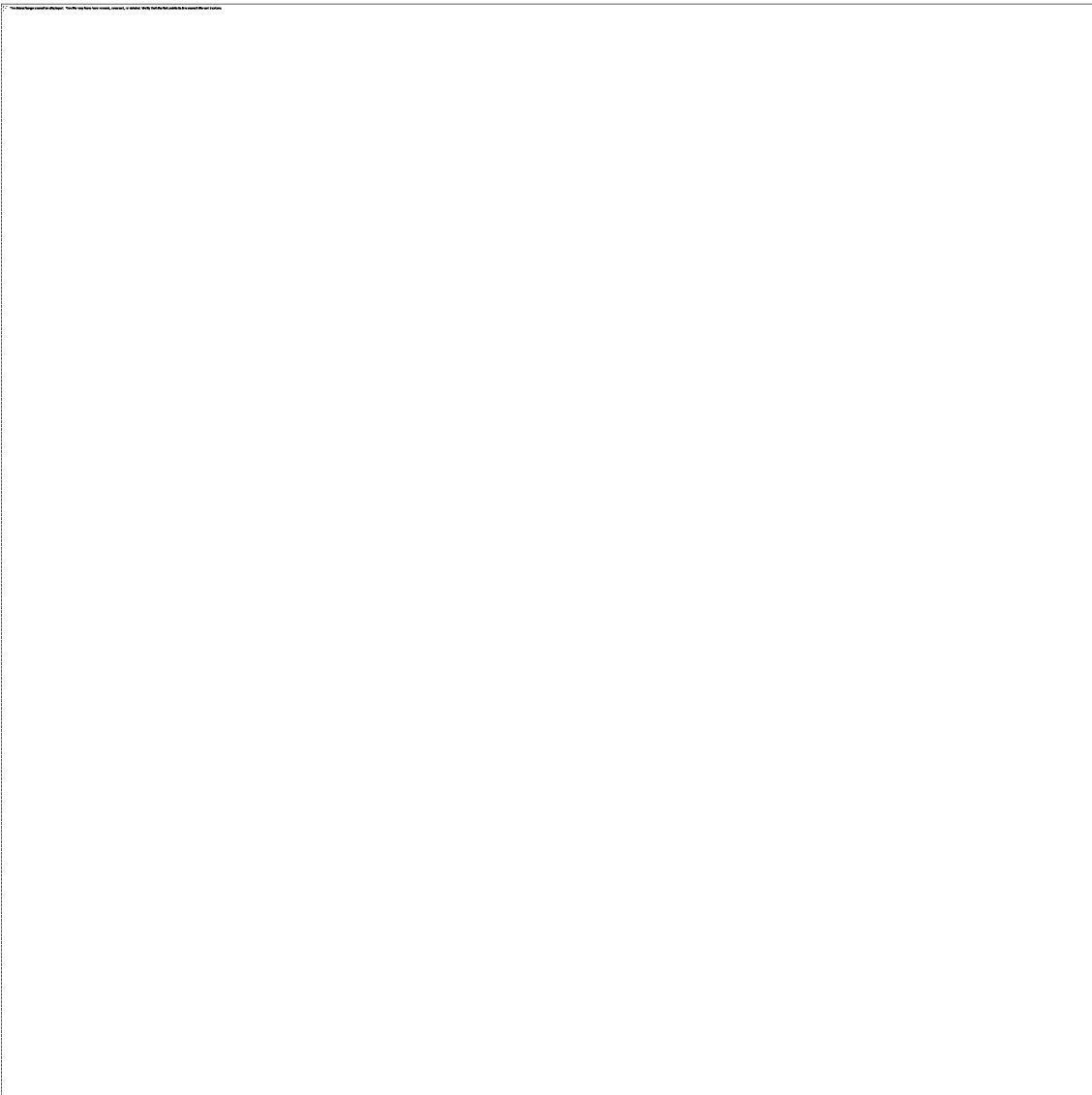


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Contact Us

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Upcoming Related Events



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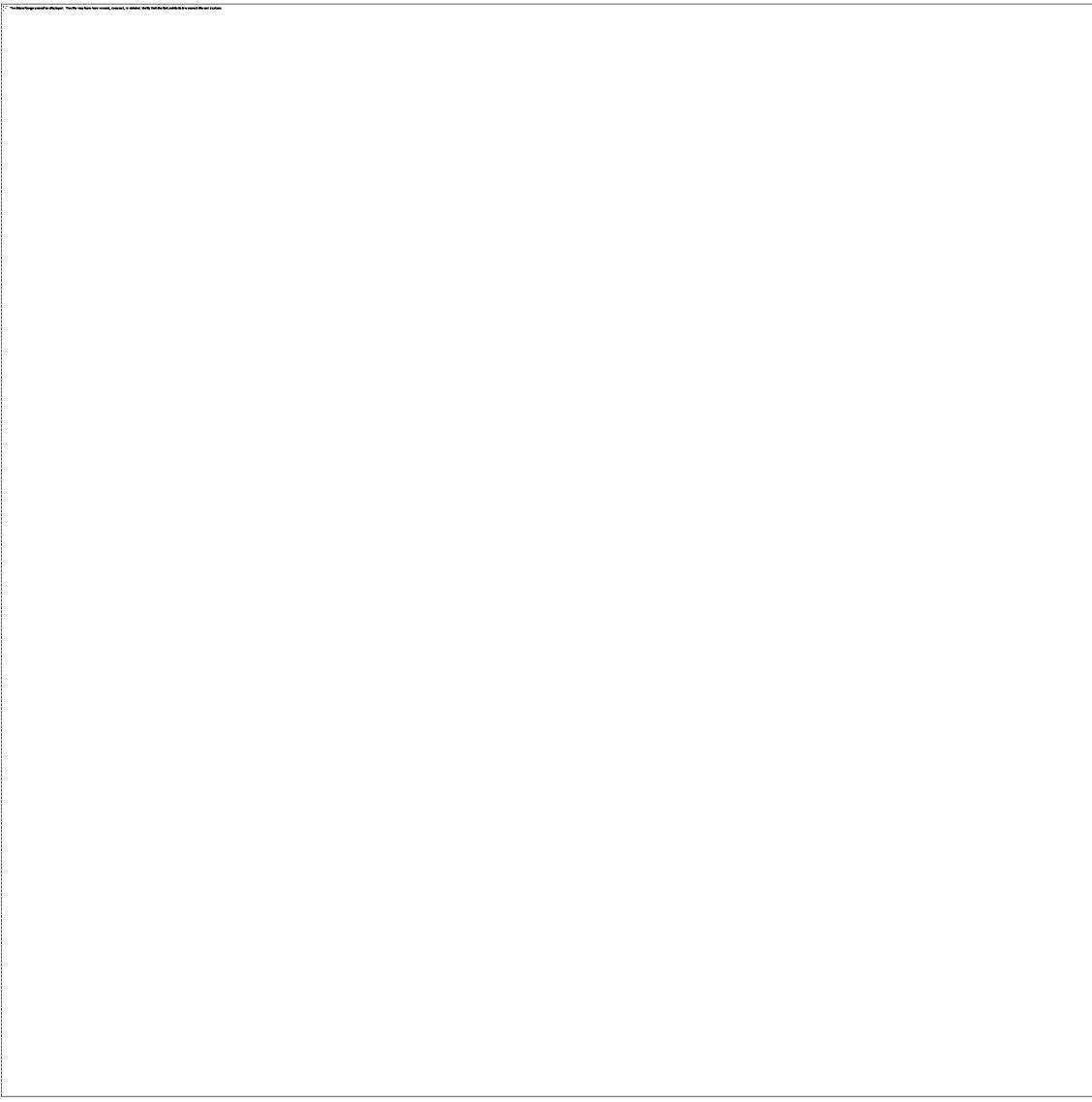
Message

From: NASEM Earth and Life Studies [DELS@nas.edu]
Sent: 4/7/2021 5:59:56 PM
To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: Join us for a conversation about the social cost of carbon and environmental justice in the United States.

Join us for a conversation about the social cost of carbon and environmental justice in the United States.

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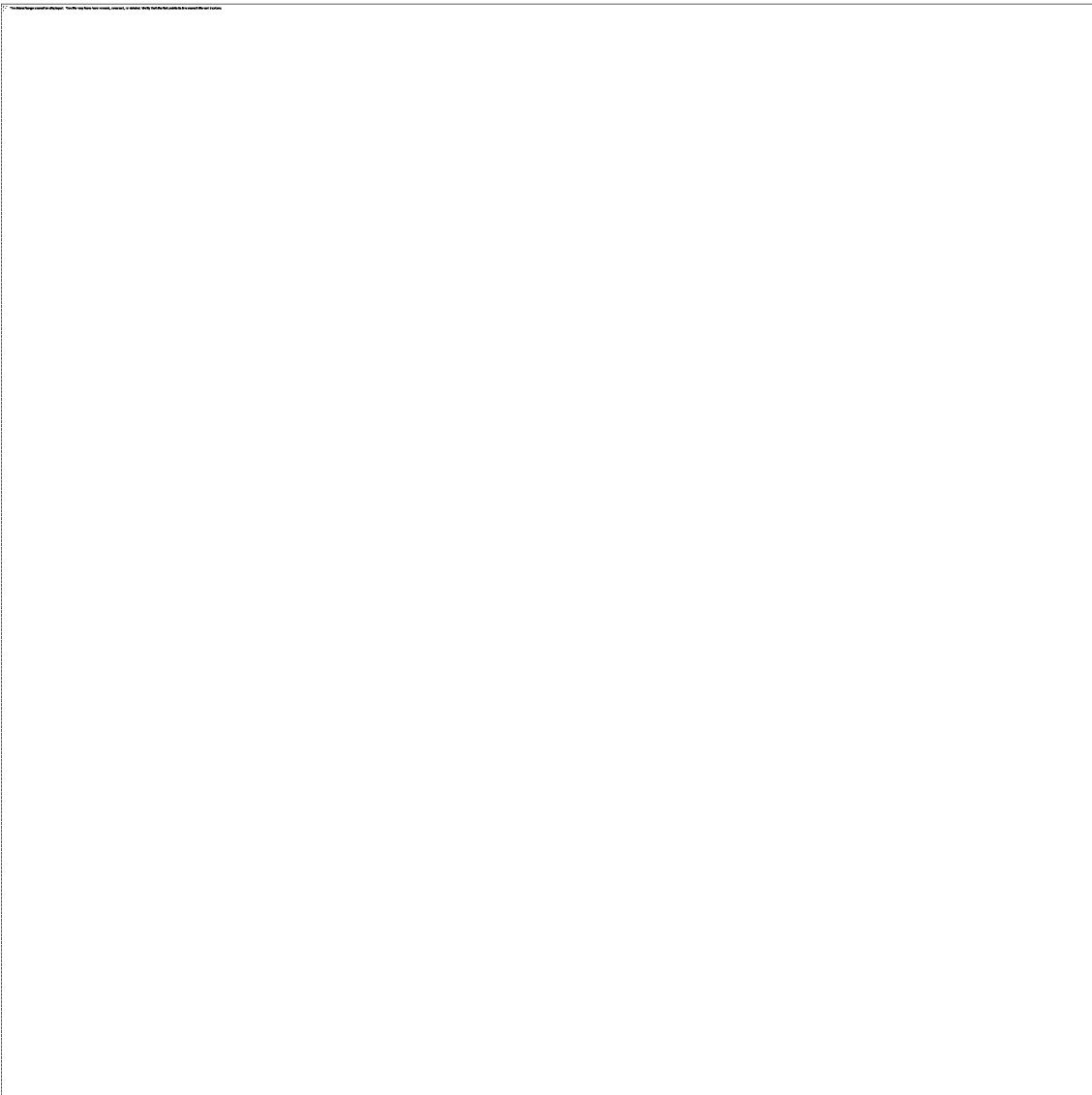
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Sent: 4/13/2021 5:59:48 PM
To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: Join us for the Nobel Prize Summit & Climate Conversations: The Cost of Carbon

Join us for the Nobel Prize Summit & Climate Conversations: The Cost of Carbon

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- Reducing Inequality

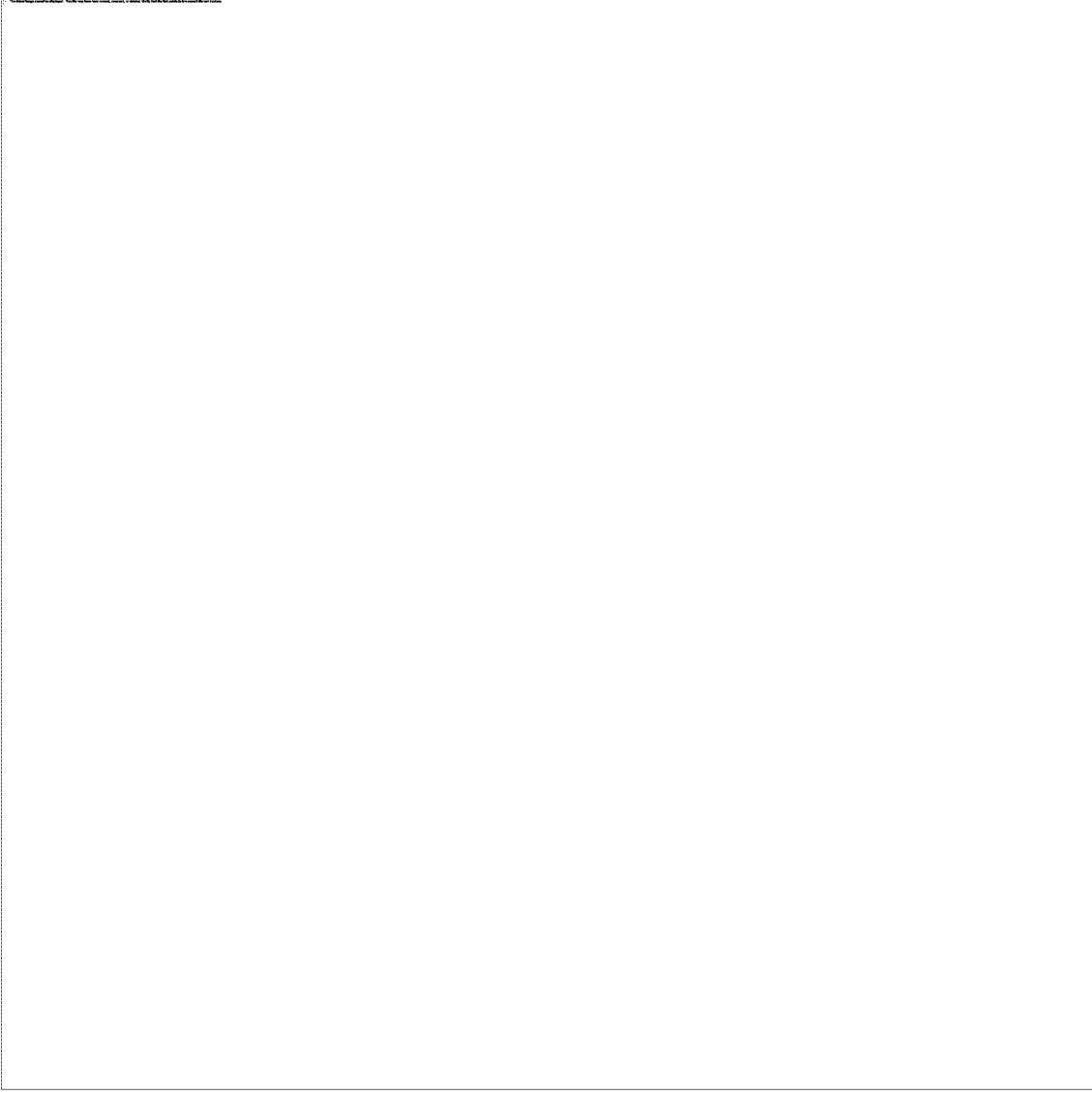
- Technologies with the Power to Transform the Way We Live and Work

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This free, online summit is a global platform for the exchange of ideas and the source of change-making approaches that will engage and entertain, motivate and embolden. Special performances by world-class artists combined with opportunities for dialogue and networking sessions round out the summit experience.

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Upcoming Division on Earth and Life Studies Events



Climate Conversations: The Cost of Carbon

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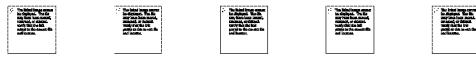
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To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: News from NASEM Climate -- April 19, 2021



April 19, 2021

IN THIS ISSUE:

- EVENT: National Academy of Sciences 158th Annual Meeting—Saturday-Sunday, April 24-25
- NOBEL PRIZE SUMMIT: Our Planet, Our Future—April 26-28
- WEBINAR SERIES: Earth Resources for the Energy Transition —April 26, May 17, and June 1
- WEBINAR: Climate Conversations: Solar Geoengineering —May 20

- [IN CASE YOU MISSED IT: Climate Conversations: The Cost of Carbon](#)
 - [WORKSHOP: The Chemistry of Urban Wildfires: An Information-Gathering Session—June 8](#)
 - [WORKSHOP: How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health— July 13, 16, and 21](#)
-



ONLINE EVENT

National Academy of Sciences 158th Annual Meeting

Saturday-Sunday, April 24-25

The NAS annual meeting takes place each year in April in Washington, DC. Highlights from each meeting include the induction of members elected the previous year, the presentation of awards recognizing outstanding contributions to science, a scientific program that features discussions on a wide-range of topics, and the election of members, both U.S. and international.

[**View the Public Program**](#)

NOBEL PRIZE SUMMIT
Our Planet, Our Future
April 26-28, 2021

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Climate Change and Biodiversity Loss
Reducing Inequality
Technologies with the Power to Transform the Way We Live and Work

Informed by lessons learned during the course of the COVID-19 pandemic, it is clear that solving these challenges must be guided by an inclusive vision for our shared future – one that is grounded in science and that safeguards our global commons.

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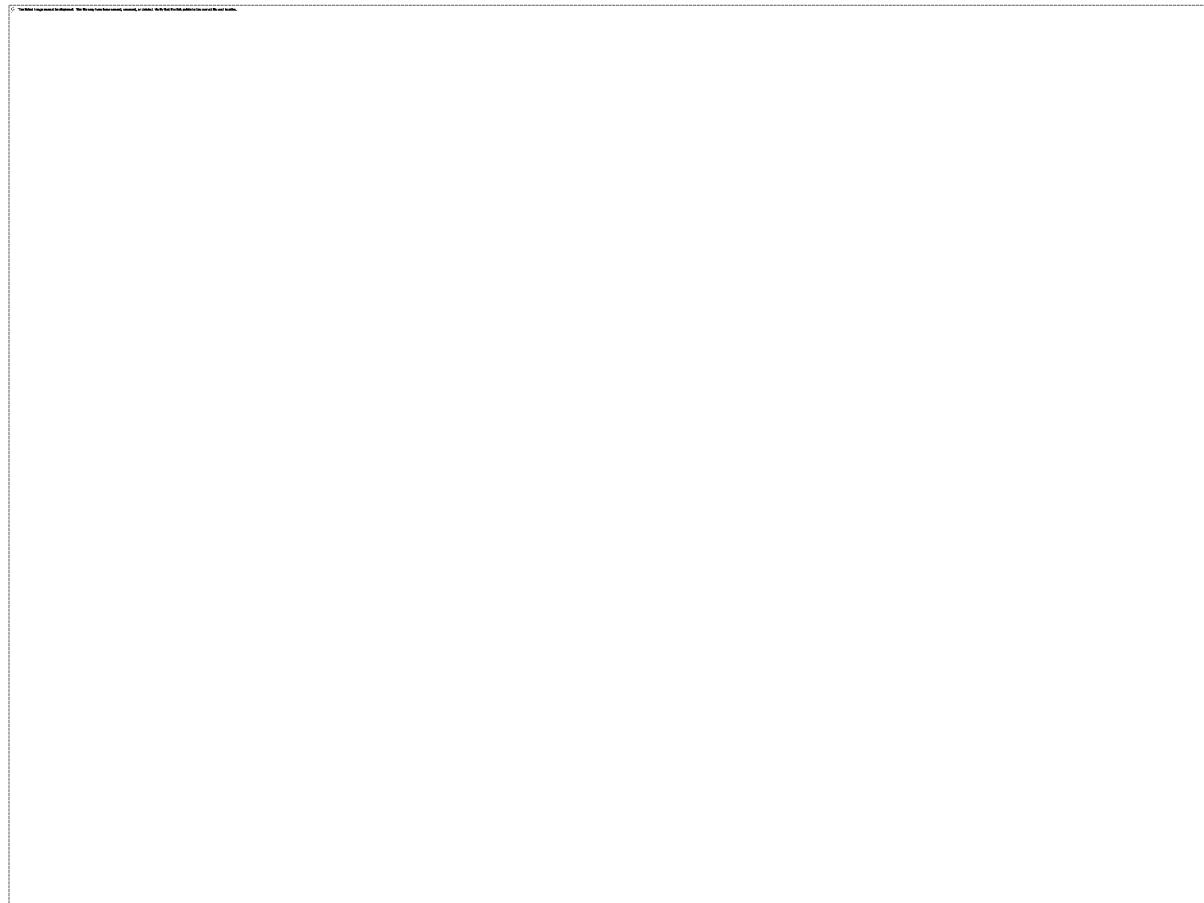
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Reserve Your Virtual Seat Today

Visit our website nobelprize.org/our-planet-our-future to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and to register for the virtual event.

Spread the word on your social channels: #NobelPrizeSummit

@nobelprize @theNASciences @PIK_Climate



WEBINAR SERIES

Earth Resources for the Energy Transition

Monday, April 26 | 1:00-3:00 PM ET

May 17 | 2:00-4:30 PM ET

Tuesday, June 1 | 2:00-4:30 PM ET

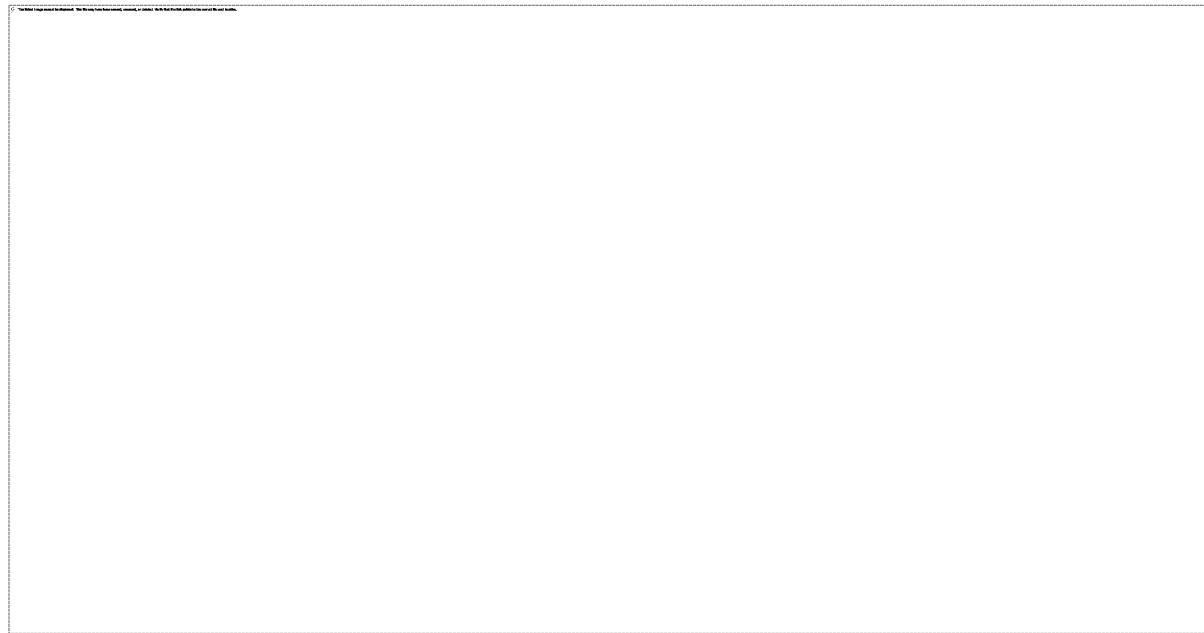
The primary energy systems that have supplied energy for transportation, industrial and agricultural production, community services, and municipal and individual uses have remained largely unchanged for decades in terms of the basic design of the electric grid and vehicular fleet but appear to be on the verge of a transformational change. The present energy transition will involve a shift in energy resources, generation, transmission, and use toward a low-carbon emissions energy system. The future is likely to be represented by a range of energy sources such as wind and solar energy, geothermal energy, nuclear energy, and hydropower, in addition to more

sustainable uses of natural gas, oil, and coal. This meeting will explore the fundamental Earth resource needs for minerals that will determine the pace and scale of the energy transition in the U.S. and globally.

Earth resources such as rare earth elements, cobalt, nickel, lithium, copper, platinum group elements, graphite, and other constituents are fundamental components in solar panels, batteries, electric vehicles, mass energy storage, and other key structural parts of the energy transition. Earth resources, beyond fossil fuels, are thus essential to develop the next generation of energy systems and infrastructure to a scale that can reliably supply the entire nation's energy needs while balancing technical, economic, environmental, and policy considerations.

The first webinar, to be held **April 26 from 1:00 till 3:00 PM ET**, will provide an overview of what "critical minerals" are; the practical needs for minerals in a variety of energy systems and related infrastructure (e.g., solar panels, batteries, mass energy storage, electric cars); and the global and U.S. national (critical) mineral supply chains.

[Register to Attend](#)



WEBINAR

Climate Conversations: Solar Geoengineering

Thursday, May 20 | 3:00-4:00 PM ET

Join us for a conversation on the possible risks and benefits of solar geoengineering as part of a portfolio of responses to climate change.

Solar geoengineering refers to a set of possible strategies to help reduce global warming by increasing the amount of solar radiation reflected away from Earth. Frank Sesno (George Washington University) will moderate a conversation with Marcia McNutt (National Academy of Sciences) and Chris Field (Stanford University) about how and whether solar geoengineering should fit into broader efforts to address climate change, the role of research in helping inform decisions about implementation, and the complex global ethics and governance issues associated with solar geoengineering. The webinar will include discussion of the new National Academies report, *Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance*, which was chaired by Dr. Field.

The conversation will be webcast on the Climate Conversations webpage on **Thursday, May 20, 2021 from 3-4 pm ET**. Closed captioning will be provided.

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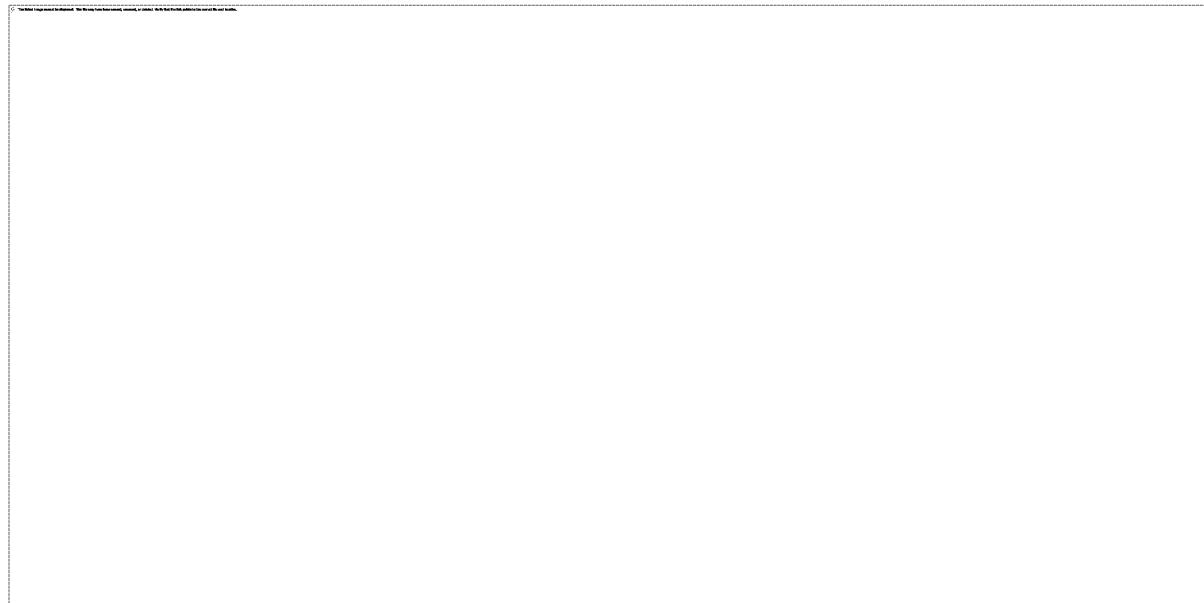
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[Watch the Conversation](#)



WORKSHOP

The Chemistry of Urban Wildfires: an Information-Gathering Session

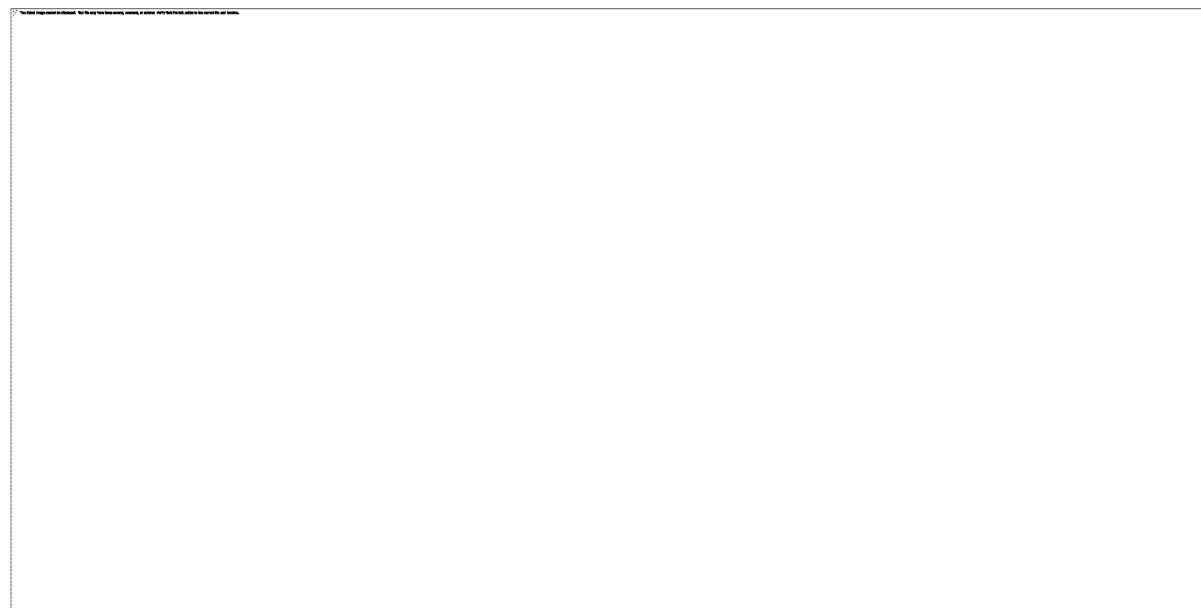
Tuesday, June 8 | 10:00 AM-5:00 PM EDT

How do fires at the wildland-urban interface (WUI) differ from wildland fires? And how does understanding these differences change how we mitigate fires and their impacts on families and communities?

The study [The Chemistry of Urban Wildfires](#) will examine these questions. Join us on Tuesday, June 8, 2021, for an all-day virtual information gathering workshop that will help inform the study committee as they develop recommendations for mitigating the impact of urban wildfires on the general public.

The specific goals of this workshop are to hear from leaders in the field in order to better understand (1) the composition of residential materials and their combustion products, (2) the sources of emissions and potential exposures, (3) the chemical processes involved, and (4) data gaps and research needs that remain.

[Register to Attend](#)



WORKSHOP

How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health

Tuesday, July 13, Friday, July 16, and Wednesday, July 21 | 11:30 AM-5:30 PM ET

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment. How does ridehailing affect air pollution in our communities? What are the environmental impacts of having packages delivered to our front door?

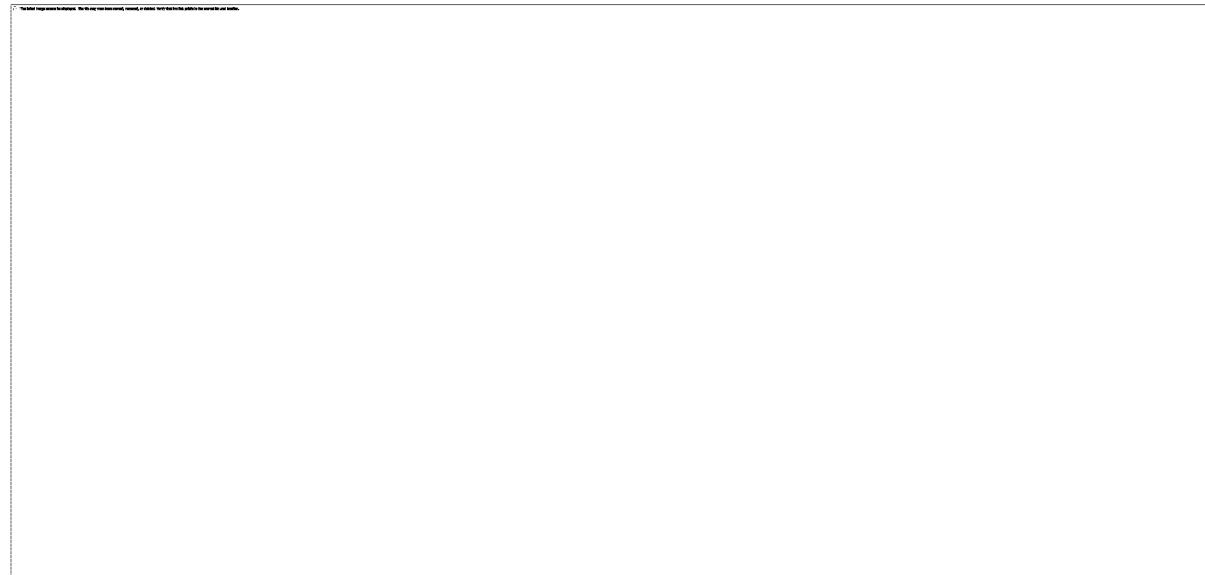
This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants

will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

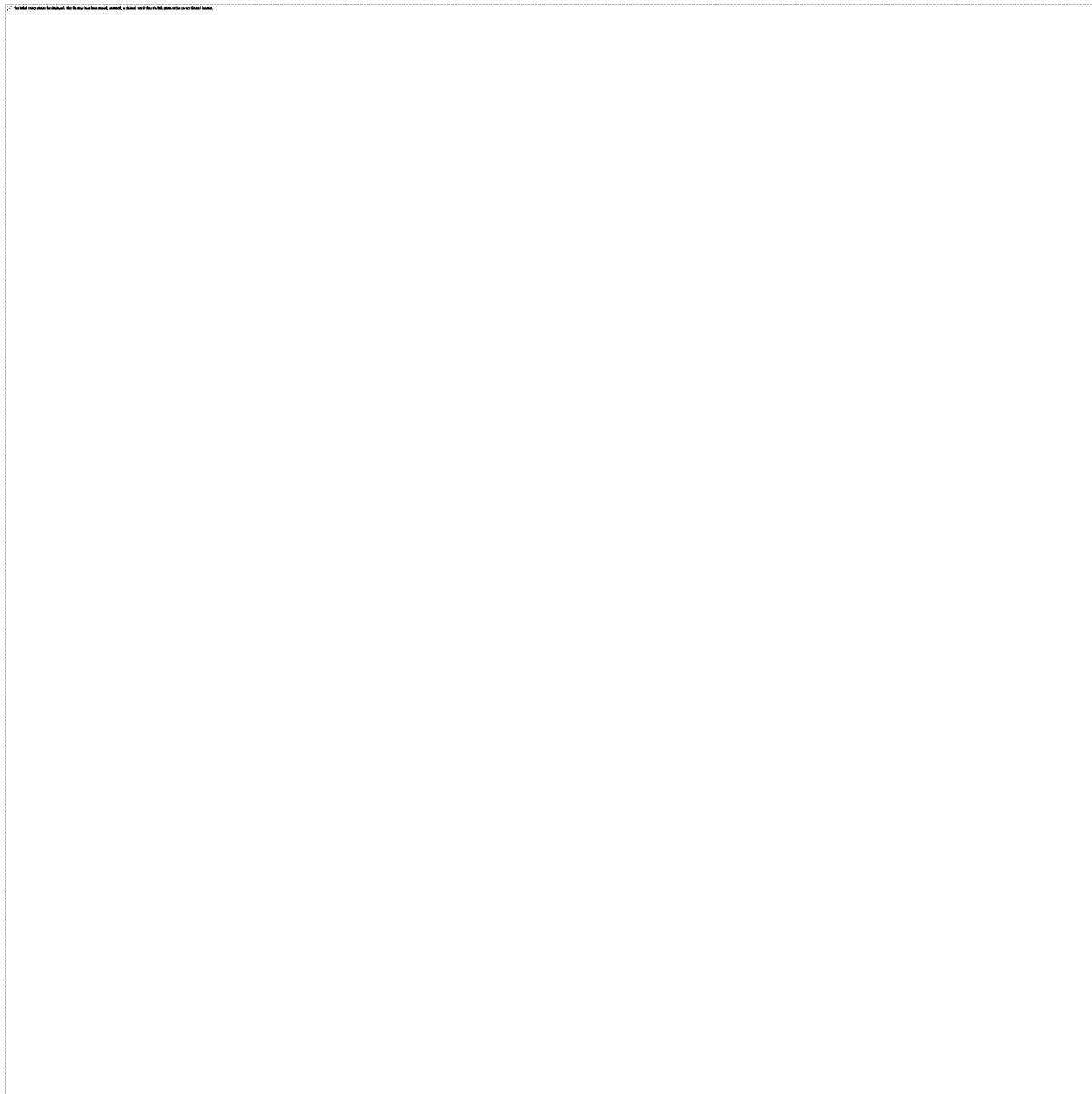
Workshop sessions will take place between 11:30 AM – 5:30 PM (ET) on July 13, 16, and 21, 2021. This workshop is public and free to attend.

More information, including the full agenda and speaker lineup, will be posted on [the event webpage](#) soon.

[Register to Attend](#)

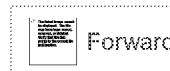
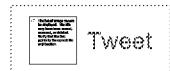


Explore Our Climate Resources



As evidence of a changing climate continues to make headlines, the National Academies has made it easier than ever to explore our wide-ranging resources on climate-related issues. Building on decades of work, we gather top experts to help the nation better understand, prepare for, and limit future climate change. Visit [Climate at the National Academies](#) for more about our upcoming events, current work, and existing resources.

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To: Hartin, Corinne [Hartin.Corinne@epa.gov]
Subject: News from NASEM Climate -- April 26, 2021



April 26, 2021

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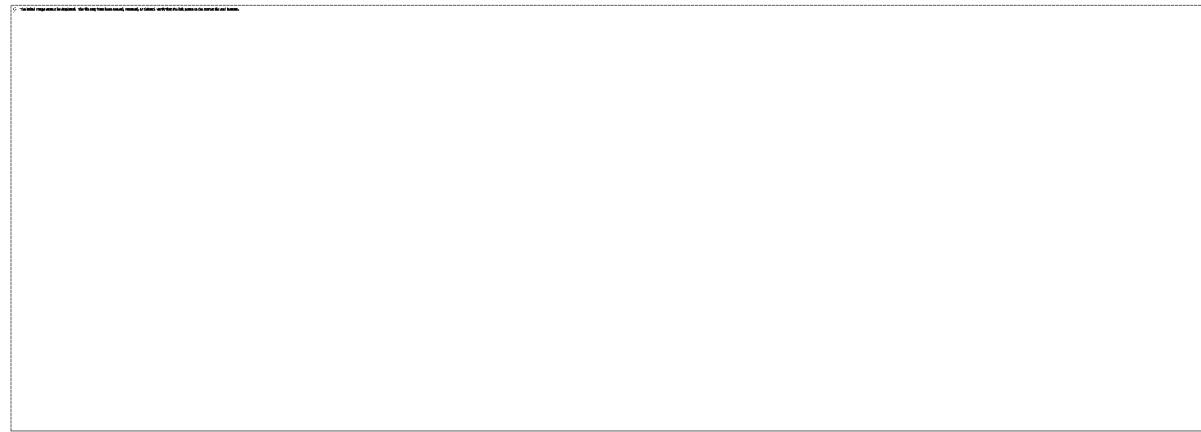
Starting Today:

- NOBEL PRIZE SUMMIT: Our Planet, Our Future—Monday-Wednesday, April 26-28, 2021

- WEBINAR SERIES: Earth Resources for the Energy Transition—Monday, April 26

Other Upcoming Events:

- WEBINAR: Climate Conversations: Solar Geoengineering—May 20
 - IN CASE YOU MISSED IT: Climate Conversations: The Cost of Carbon
- PUBLIC SESSION: Oil in the Sea IV: Indigenous Perspectives—May 21
- WORKSHOP: The Chemistry of Urban Wildfires: An Information-Gathering Session— June 8
- WORKSHOP: How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health—July 13, 16, and 21
- WORKSHOP: Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research—June 21-23



STARTS TODAY

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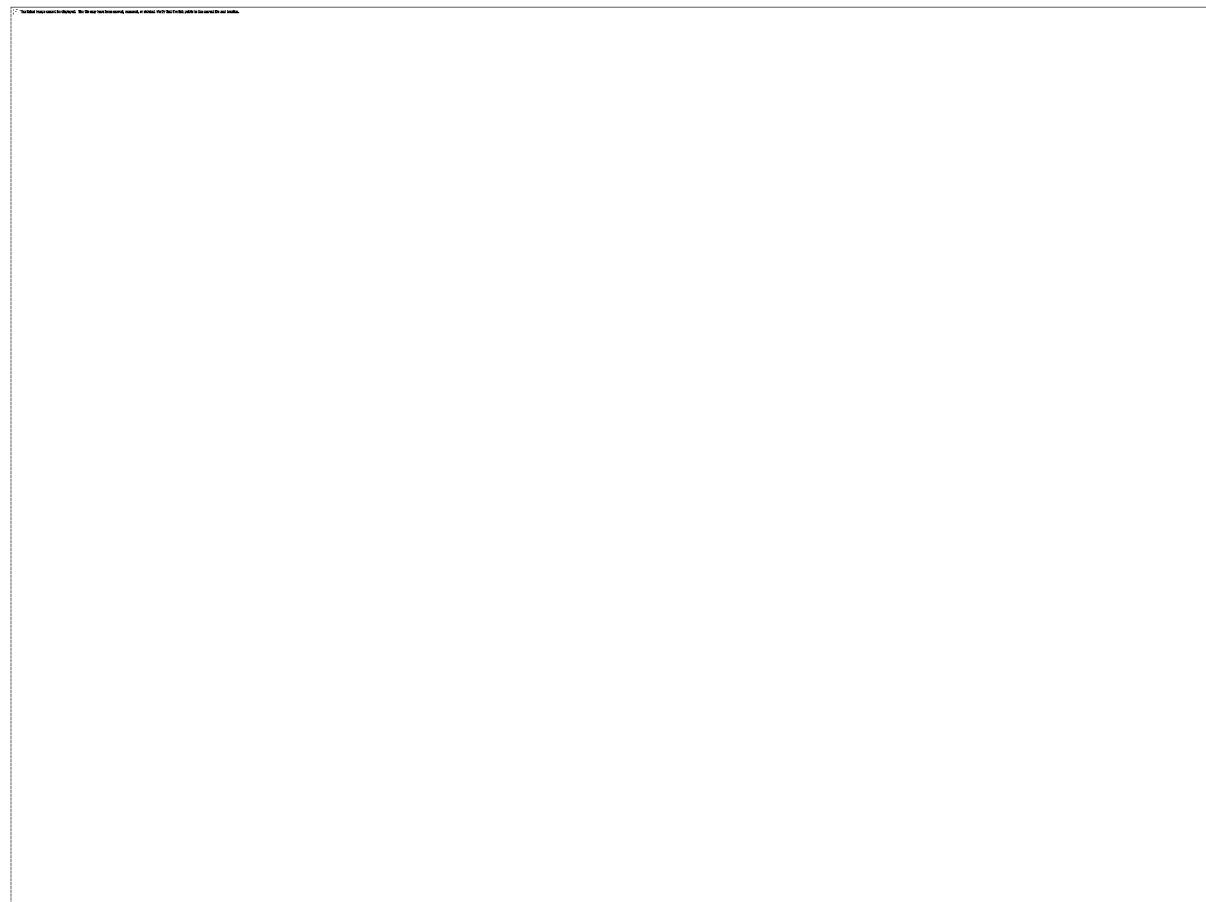
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Monday, May 17 | 2:00-4:30 PM ET

Tuesday, June 1 | 2:00-4:30 PM ET

The primary energy systems that have supplied energy for transportation, industrial and agricultural production, community services, and municipal and individual uses have remained largely unchanged for decades in terms of the basic design of the electric grid and vehicular fleet but appear to be on the verge of a transformational change. The present energy transition will involve a shift in energy resources, generation, transmission, and use toward a low-carbon emissions energy system. The future is likely to be represented by a range of energy sources such as wind and solar energy, geothermal energy, nuclear energy, and hydropower, in addition to more sustainable uses of natural gas, oil, and coal. This meeting will explore the fundamental Earth resource needs for minerals that will determine the pace and scale of the energy transition in the U.S. and globally.

Earth resources such as rare earth elements, cobalt, nickel, lithium, copper, platinum group elements, graphite, and other constituents are fundamental components in solar panels, batteries, electric vehicles, mass energy storage, and other key structural parts of the energy transition. Earth resources, beyond fossil fuels, are thus essential to develop the next generation of energy systems and infrastructure to a scale that can reliably supply the entire nation's energy needs while balancing technical, economic, environmental, and policy considerations.

The first webinar, to be held **April 26 from 1:00 till 3:00 PM ET**, will provide an overview of what "critical minerals" are; the practical needs for minerals in a variety of energy systems and related infrastructure (e.g., solar panels, batteries, mass energy storage, electric cars); and the global and U.S. national (critical) mineral supply chains.

[Register to Attend](#)



WEBINAR

Climate Conversations: Solar Geoengineering

Thursday, May 20 | 3:00-4:00 PM ET

Join us for a conversation on the possible risks and benefits of solar geoengineering as part of a portfolio of responses to climate change.

Solar geoengineering refers to a set of possible strategies to help reduce global warming by increasing the amount of solar radiation reflected away from Earth. Frank Sesno (George Washington University) will moderate a conversation with Marcia McNutt (National Academy of Sciences) and Chris Field (Stanford University) about how and whether solar geoengineering should fit into broader efforts to address climate change, the role of research in helping inform decisions about implementation, and the complex global ethics and governance issues associated with solar geoengineering. The webinar will include discussion of the new National Academies report, *Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance*, which was chaired by Dr. Field.

The conversation will be webcast on the Climate Conversations webpage on **Thursday, May 20, 2021 from 3-4 pm ET**. Closed captioning will be provided.

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

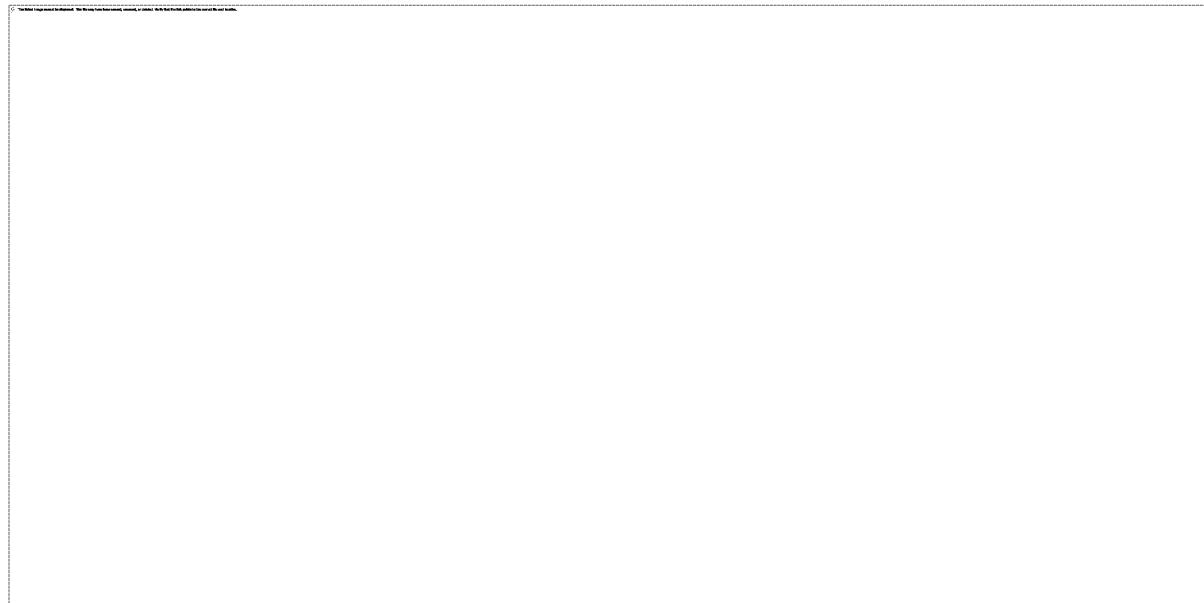
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In Case You Missed It:

Climate Conversations: The Cost of Carbon

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. In our April 15 Climate Conversation, Justin Worland (TIME) moderated a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation also touched on the social cost of other greenhouse gases.

[Watch the Conversation](#)



WORKSHOP

The Chemistry of Urban Wildfires: an Information-Gathering Session

Tuesday, June 8 | 10:00 AM-5:00 PM ET

How do fires at the wildland-urban interface (WUI) differ from wildland fires? And how does understanding these differences change how we mitigate fires and their impacts on families and communities?

The study [The Chemistry of Urban Wildfires](#) will examine these questions. Join us on Tuesday, June 8, 2021, for an all-day virtual information gathering workshop that will help inform the study committee as they develop recommendations for mitigating the impact of urban wildfires on the general public.

The specific goals of this workshop are to hear from leaders in the field in order to better understand (1) the composition of residential materials and their combustion products, (2) the sources of emissions and potential exposures, (3) the chemical processes involved, and (4) data gaps and research needs that remain.

[Register to Attend](#)

PUBLIC SESSION

Oil in the Sea IV: Indigenous Perspectives

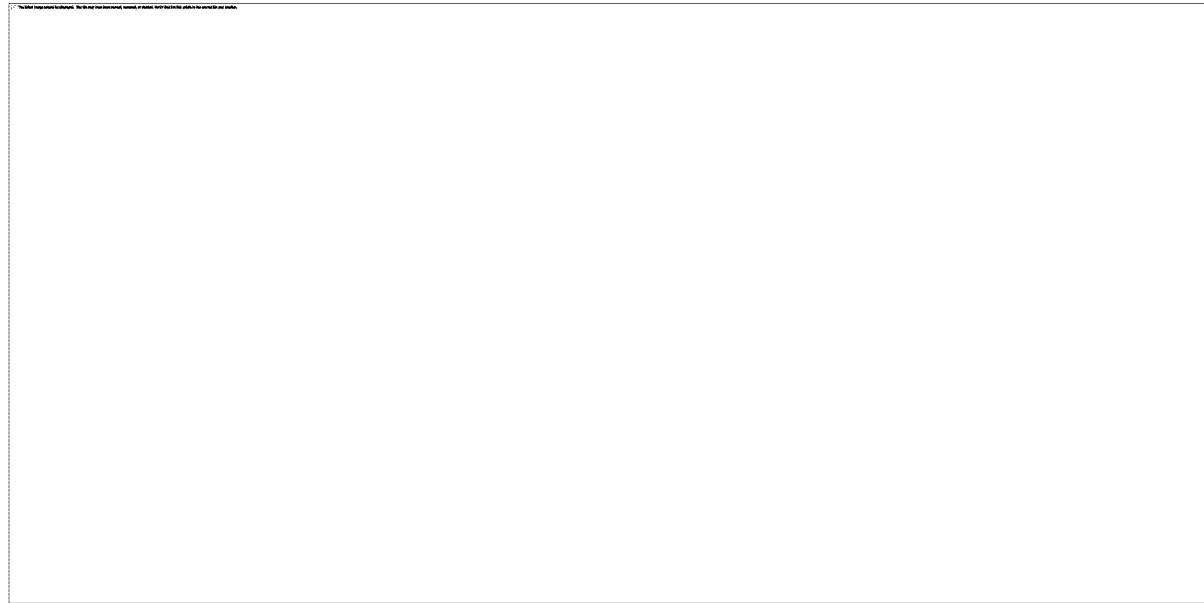
Friday, May 21, 2021 | 11:00 AM-4:45 PM ET

The ninth meeting of the NASEM Committee on Oil in the Sea IV: Inputs, Fates and Effects, will convene a variety of speakers to discuss Indigenous perspectives related to fossil fuel hydrocarbons in the marine environment. More information will be made available once the agenda and speakers are finalized. Please check the [event page](#) for the latest information.

The Committee on Oil in the Sea IV: Inputs, Fates, and Effects will provide an update of the previous report's (*Oil in the Sea III: Inputs, Fates, and Effects, 2003*) inventory of the sources, composition, and quantity of hydrocarbon inputs as well as an assessment of the state of the science on the fate and effects of fossil fuel hydrocarbons in the marine environment. The final report will be completed by Spring of 2022.

The Friday, May 21, 2021, virtual event will take place from 11 AM to 4:45 PM ET on ZoomGov. If you would like to learn more about the study, [please visit the website](#).

Register to Attend



WORKSHOP

How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health

Tuesday, July 13; Friday, July 16; Wednesday, July 21 | 11:30 AM-5:30 PM ET

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment. How does ridehailing affect air pollution in our communities? What are the environmental impacts of having packages delivered to our front door?

This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

Workshop sessions will take place between 11:30 AM – 5:30 PM (ET) on July 13, 16, and 21, 2021. This workshop is public and free to attend.

More information, including the full agenda and speaker lineup, will be posted on [the event webpage](#) soon.

[Register to Attend](#)

WORKSHOP

Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research

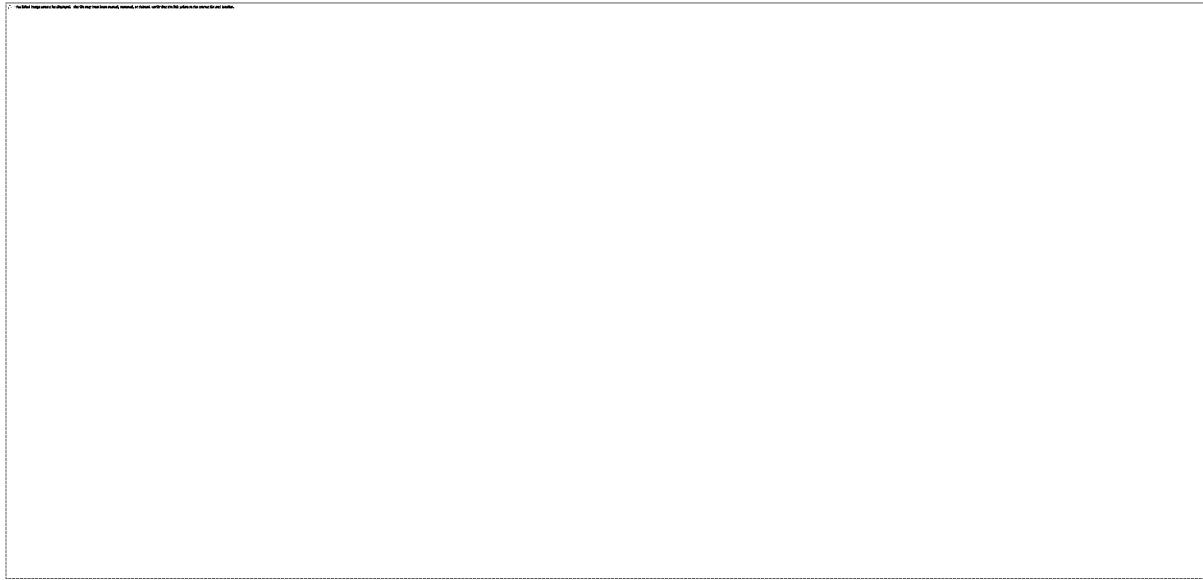
June 21-23, 2021

12:00 pm – 5:00 pm ET each day

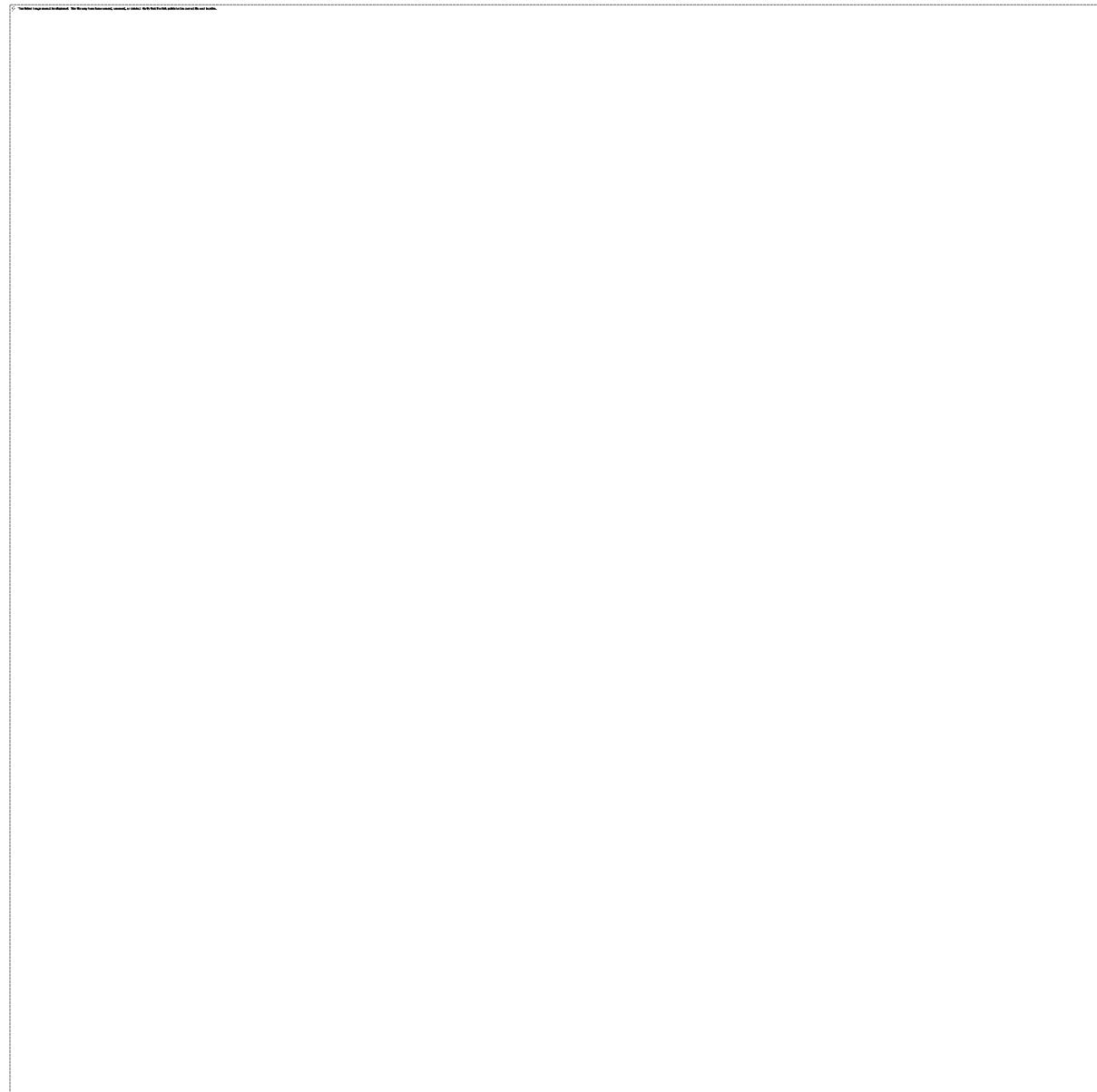
Please join us on June 21-23, 2021 for a virtual workshop on [Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research](#). The workshop seeks to identify potential future paleoclimate research directions that will help advance understanding of current and future change in the Earth's climate system. Drawing upon broad community input collected via an online questionnaire, workshop discussions will address gaps in our current understanding of past climate variability and processes, and new research strategies and technological capabilities that could practically be undertaken to effectively fill these knowledge gaps. Details on workshop goals and planning committee members can be found [on our website](#) (agenda and additional details are forthcoming).

Your participation is critical to ensure that the workshop reflects the priorities of the broad paleoclimate research community.

[Register to Attend](#)

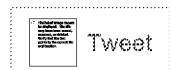


Explore Our Climate Resources



As evidence of a changing climate continues to make headlines, the National Academies has made it easier than ever to explore our wide-ranging resources on climate-related issues. Building on decades of work, we gather top experts to help the nation better understand, prepare for, and limit future climate change. Visit [Climate at the National Academies](#) for more about our upcoming events, current work, and existing resources.

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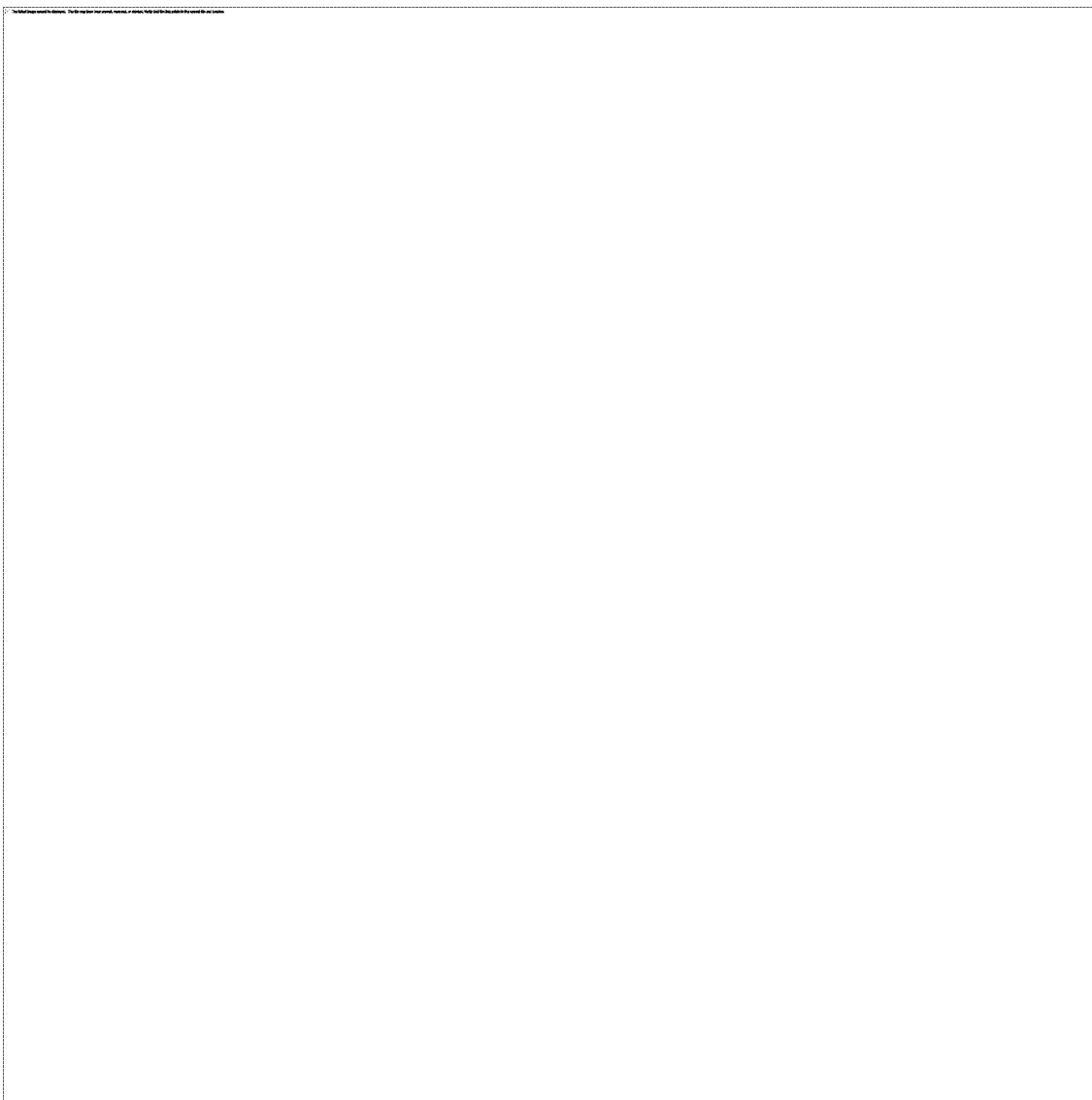
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Climate Conversations: The Cost of Carbon

April 15, 2021 | 3:00-4:00 PM ET

Join us for a conversation about the social cost of carbon and environmental justice in the United States.

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance just and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

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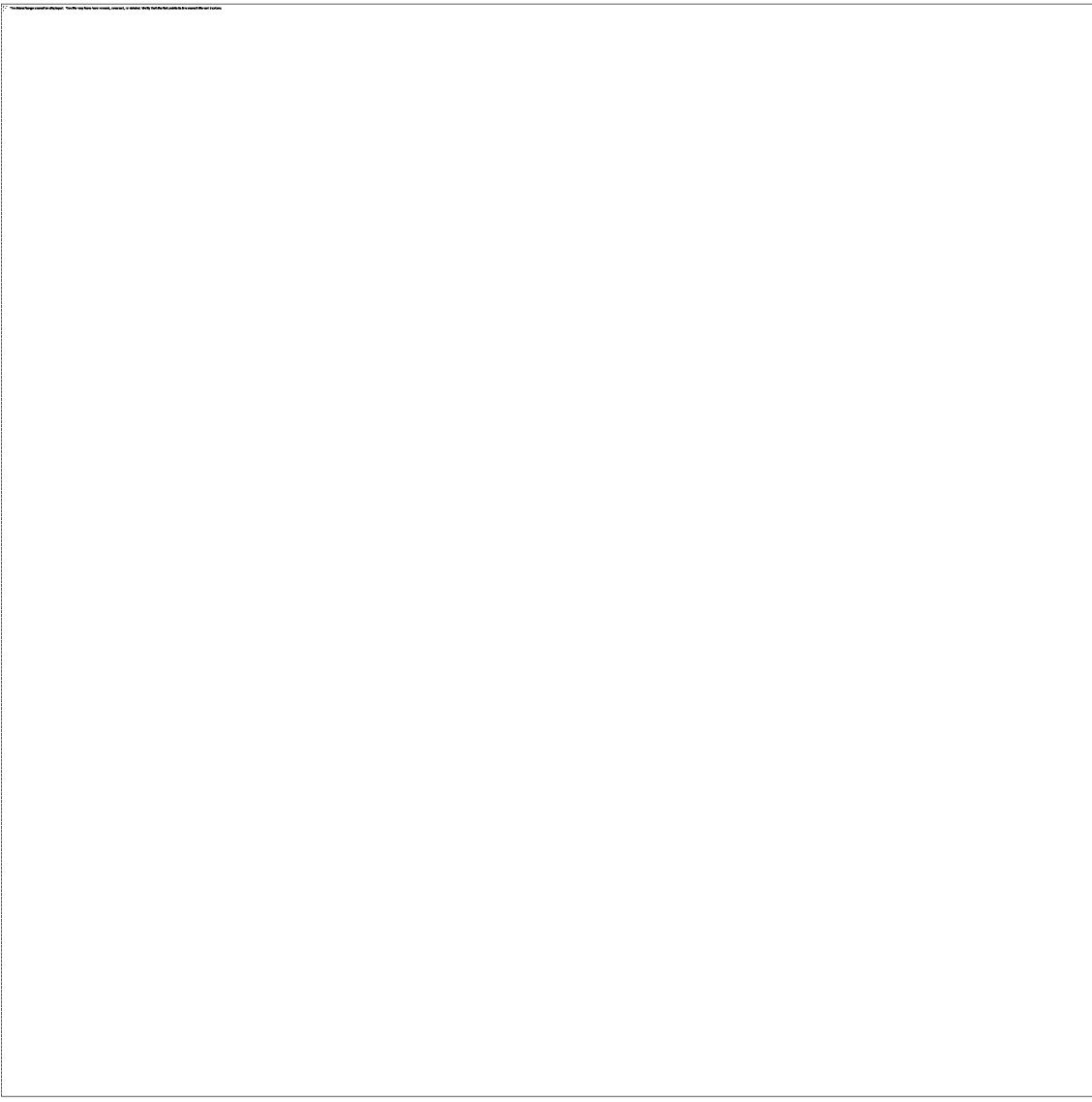


The event will be webcast on the [Climate Conversations webpage](#), which also includes participant biographies. Closed captioning will be provided.

Contact Us

If you have any questions about the Climate Conversations: Pathways to Action monthly webinar series, please contact Alex Reich at areich@nas.edu.

Upcoming Related Events



April 26-28, 2021

Inspired by Alfred Nobel's belief in celebrating achievements that contribute "the greatest benefit to humankind," the Nobel Foundation, the U.S. National Academy of Sciences, and the Potsdam Institute for Climate Impact Research/Stockholm Resilience Centre invite you to engage in an optimistic exploration of the best version of our collective future. The first Nobel Prize Summit will convene talks from Nobel laureates and conversations among experts from the science, policy, arts, and youth activist communities.

Visit our website nobelprize.org/our-planet-our-future to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and register for the virtual event.

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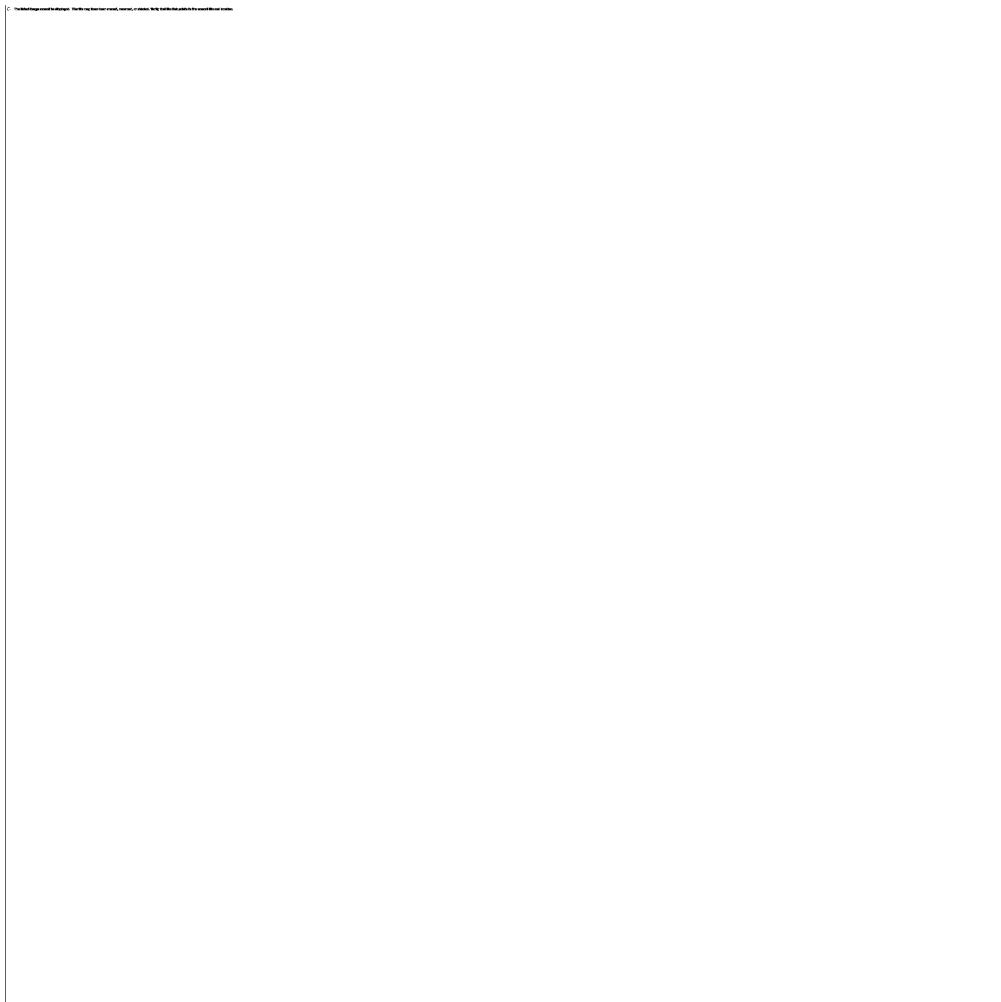
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Upcoming Climate Conversations Webinar

Climate & COVID-19

March 18, 2021 | 3:00-4:00 PM EDT

[Register Now](#)

Join us for a conversation about the climate crisis and COVID-19 pandemic, and steps to a more resilient and equitable future.

Almost exactly one year after U.S. COVID-19 lockdowns began, Laura Helmuth (Scientific American) will moderate a [conversation](#) between Georges Benjamin (APHA) and Kristie Ebi (University of Washington) that is both reflective about the intersections between climate change and COVID-19 over the last year, and forward-looking at the state of progress on addressing these issues in the U.S.

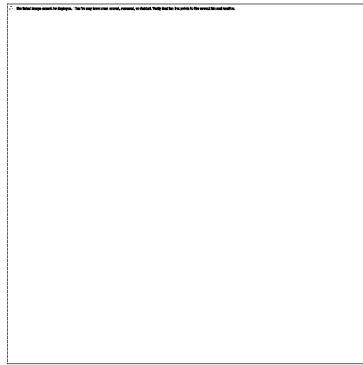
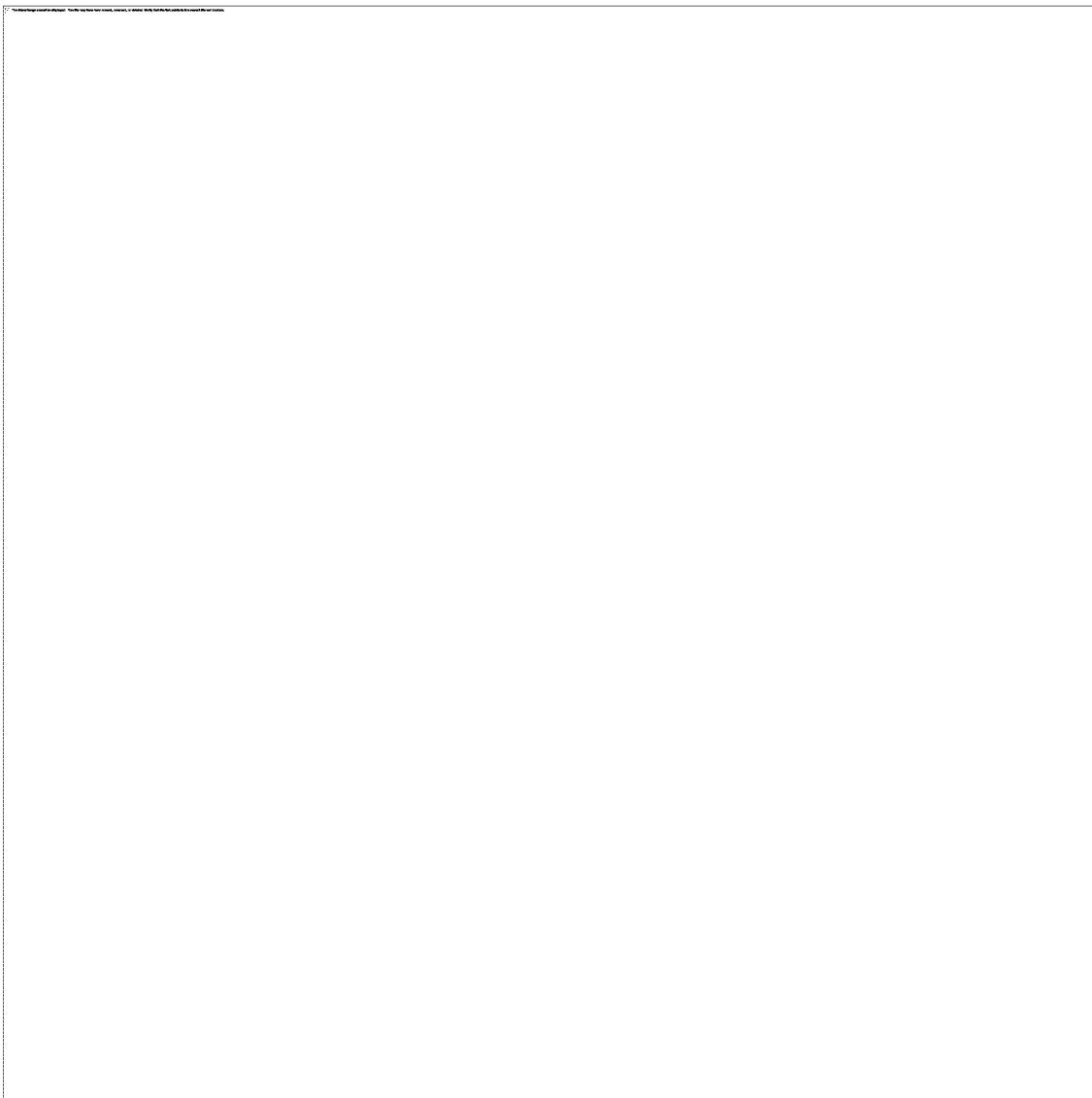
[Climate Conversations: Pathways to Action](#) is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

Participant Bios

Georges Benjamin has served as the executive director of the American Public Health Association, the nation's oldest and largest organization of public health professionals, since December 2002. Well known as a health leader, practitioner, and administrator, he is a former secretary of health for the State of Maryland.

Kristie L. Ebi is a Professor in the Department of Global Health and in the Department of Environmental and Occupational Health Sciences at the University of Washington. She conducts research on the impacts of and adaptation to climate change, including on extreme events, thermal stress, foodborne safety and security, waterborne diseases, and vectorborne diseases.

Laura Helmuth is the Editor-in-Chief of Scientific American. Previously, she was The Washington Post's Science and Health Editor and president of the National Association of Science Writers.



Climate Change: Evidence and Causes: Update 2020

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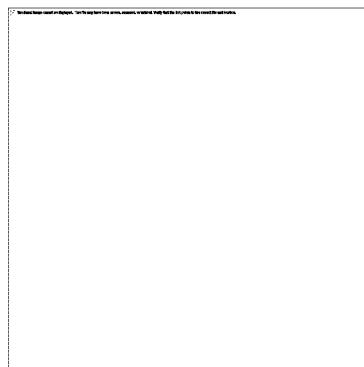
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Rapid Expert Consultations on the COVID-19 Pandemic: March 14, 2020-April 8, 2020

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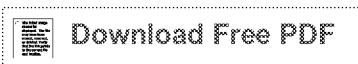


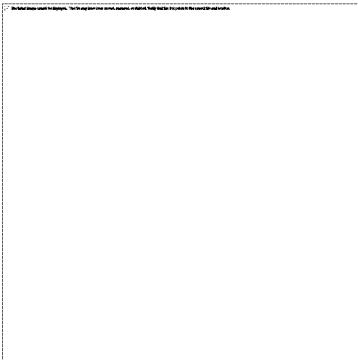
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Discussion Draft of the Preliminary Framework for Equitable Allocation of COVID-19 Vaccine

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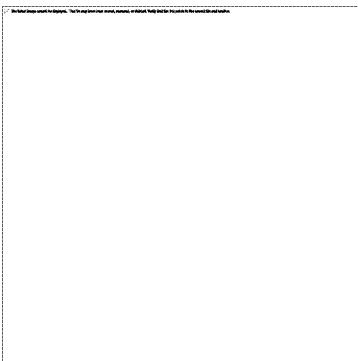
Airborne Transmission of SARS-CoV-2: Proceedings of a Workshop—in Brief

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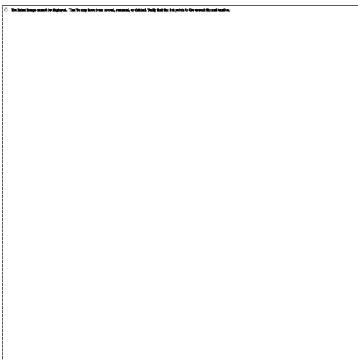
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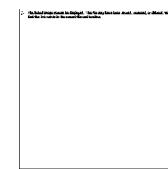
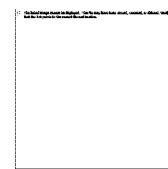


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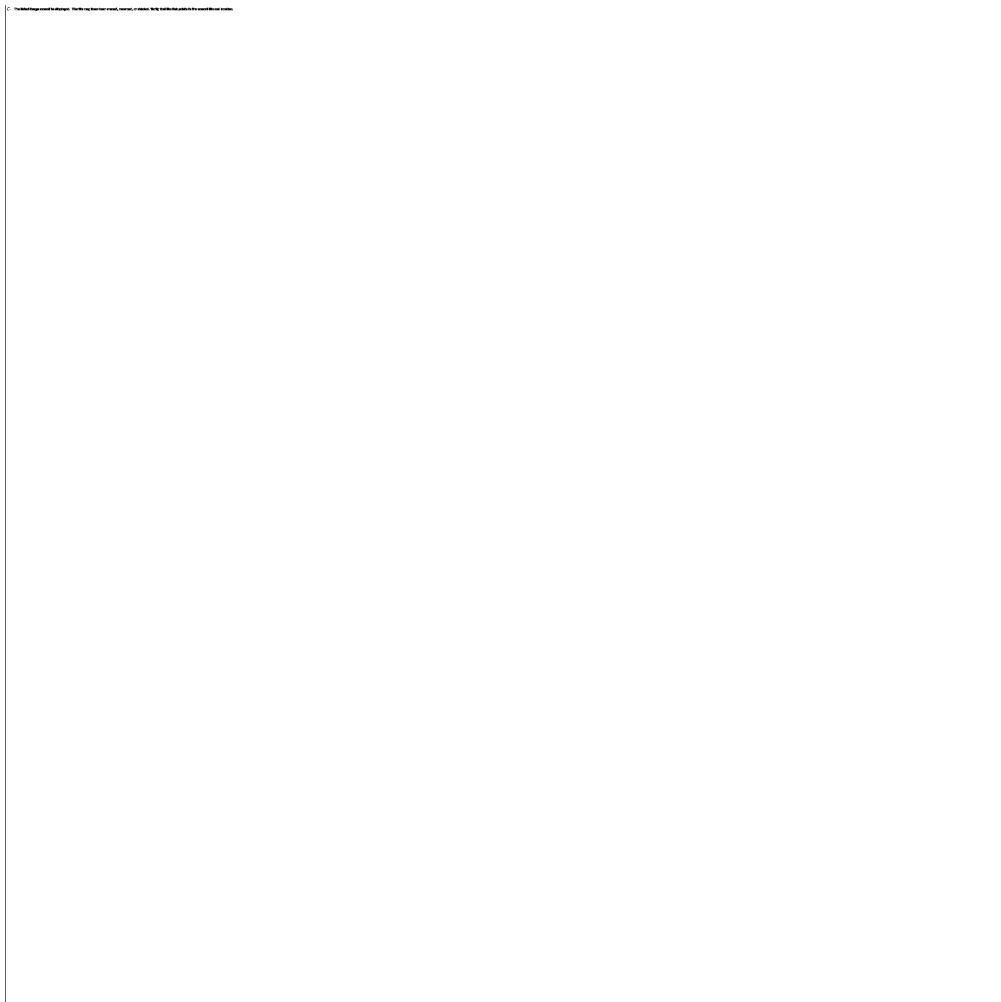
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Climate Conversations: The Cost of Carbon

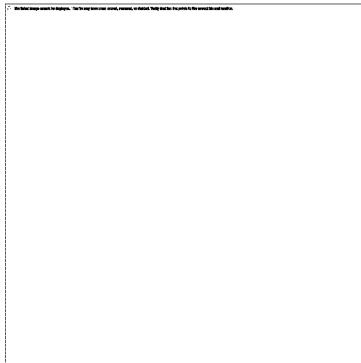
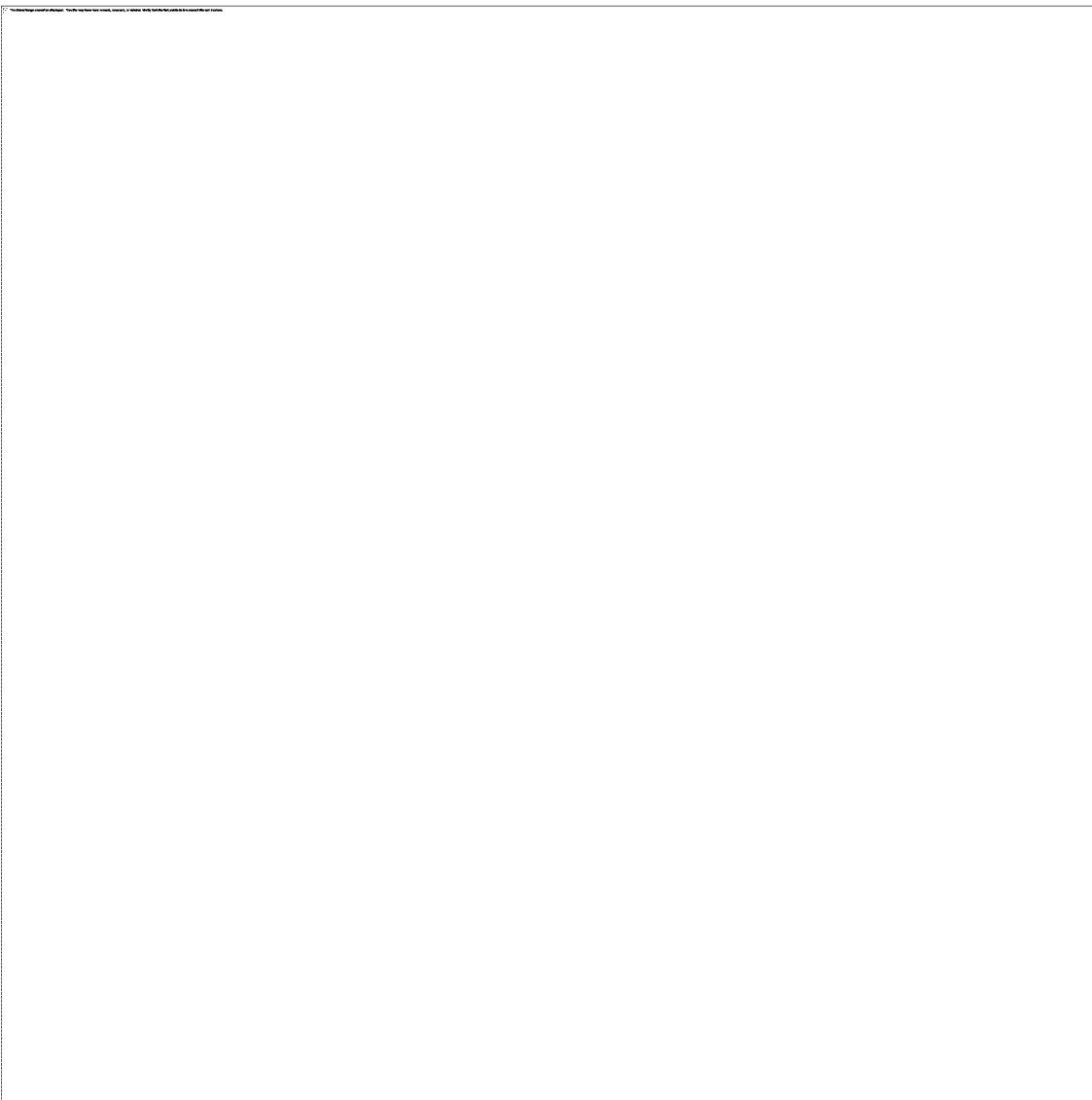
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*Join us for a virtual conversation about the social cost of carbon
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The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

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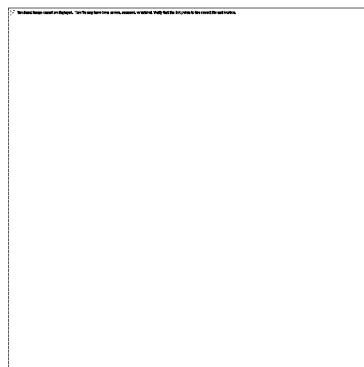
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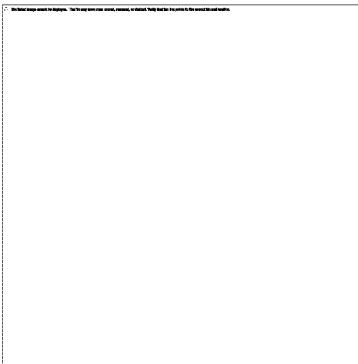
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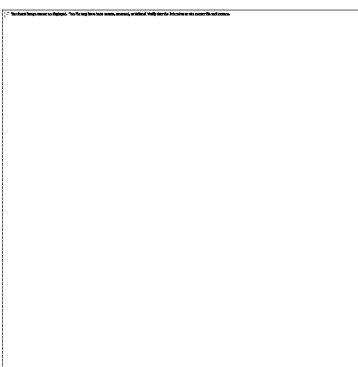


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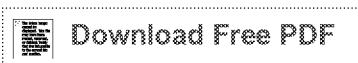


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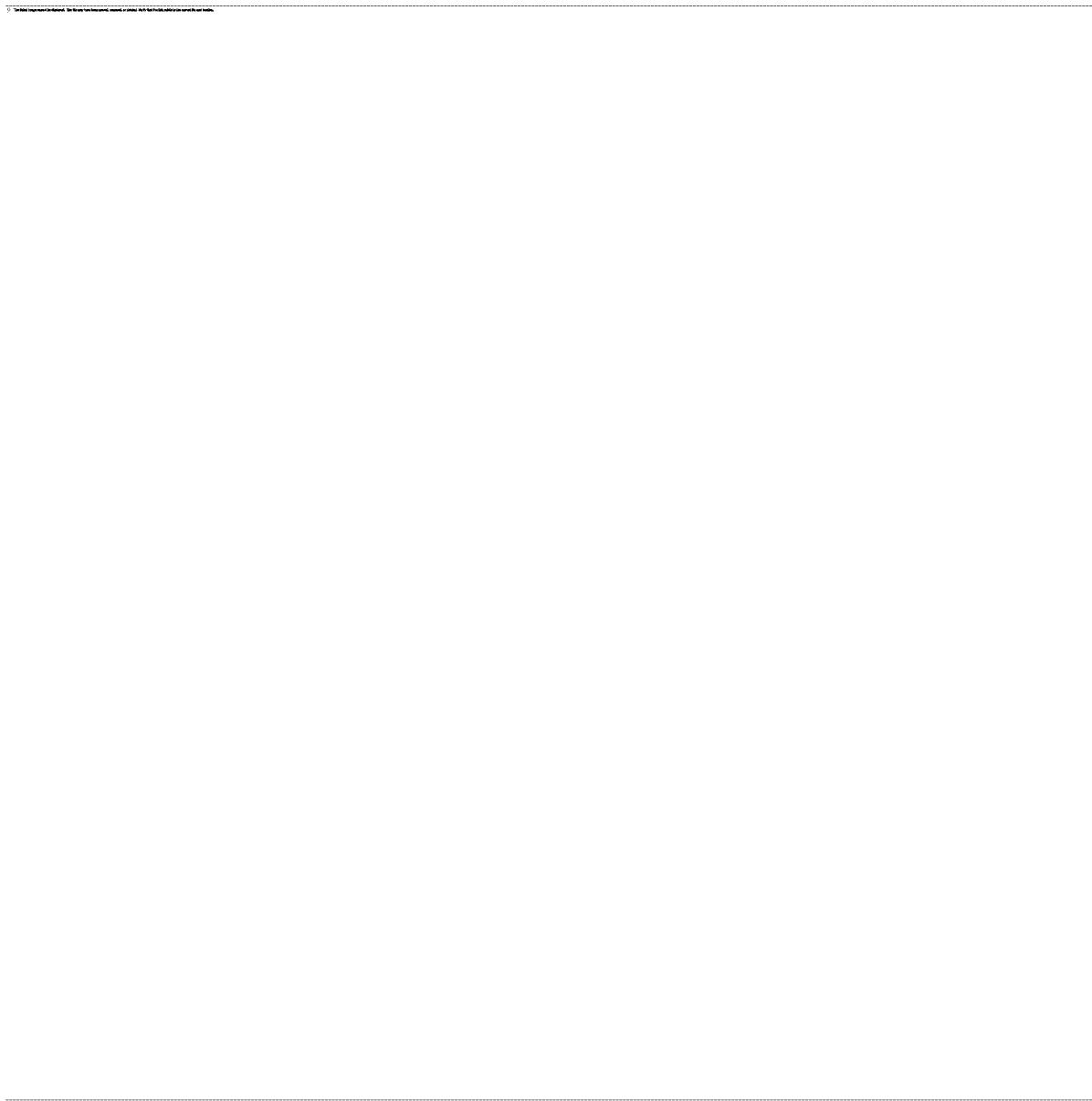
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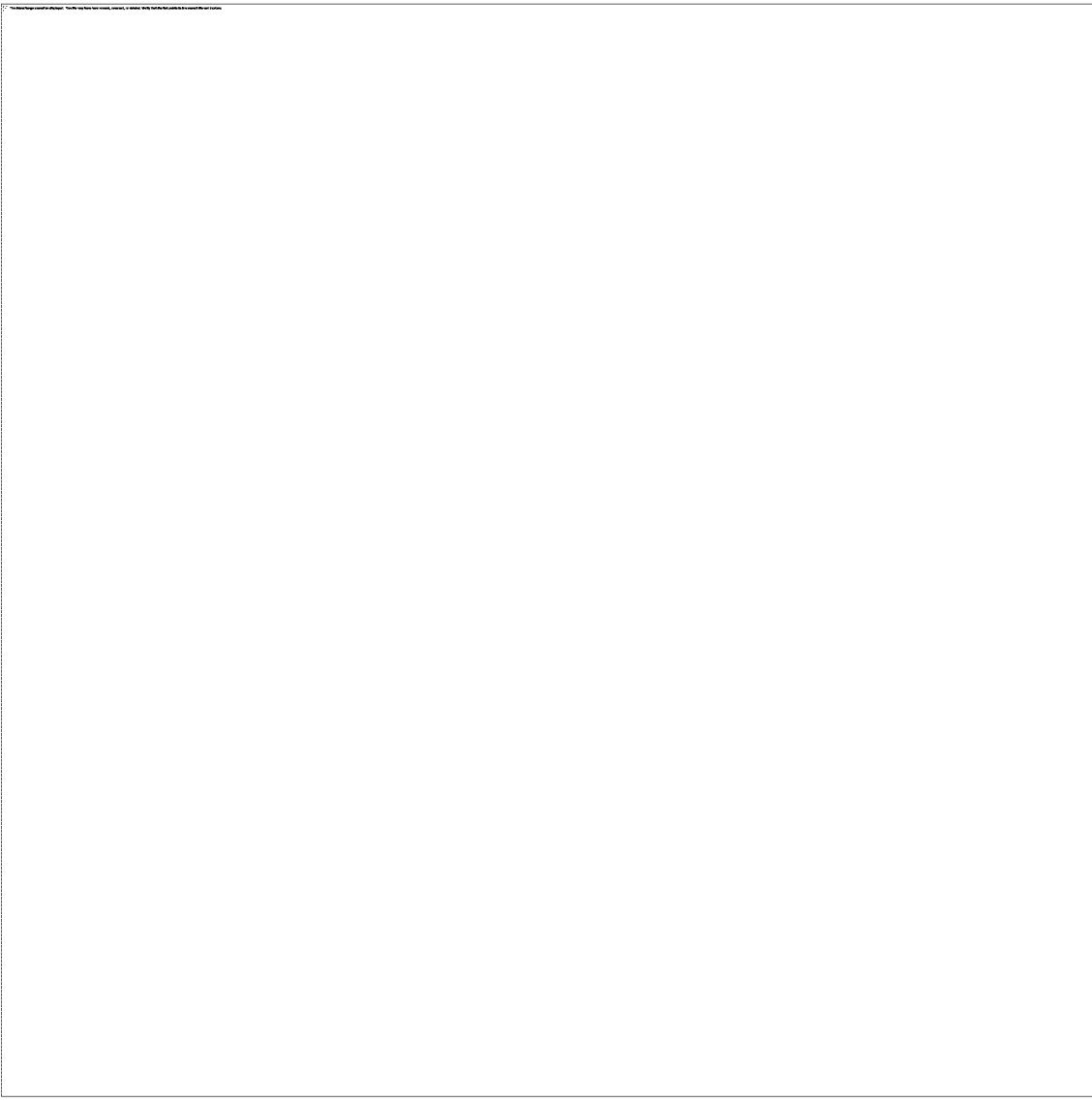
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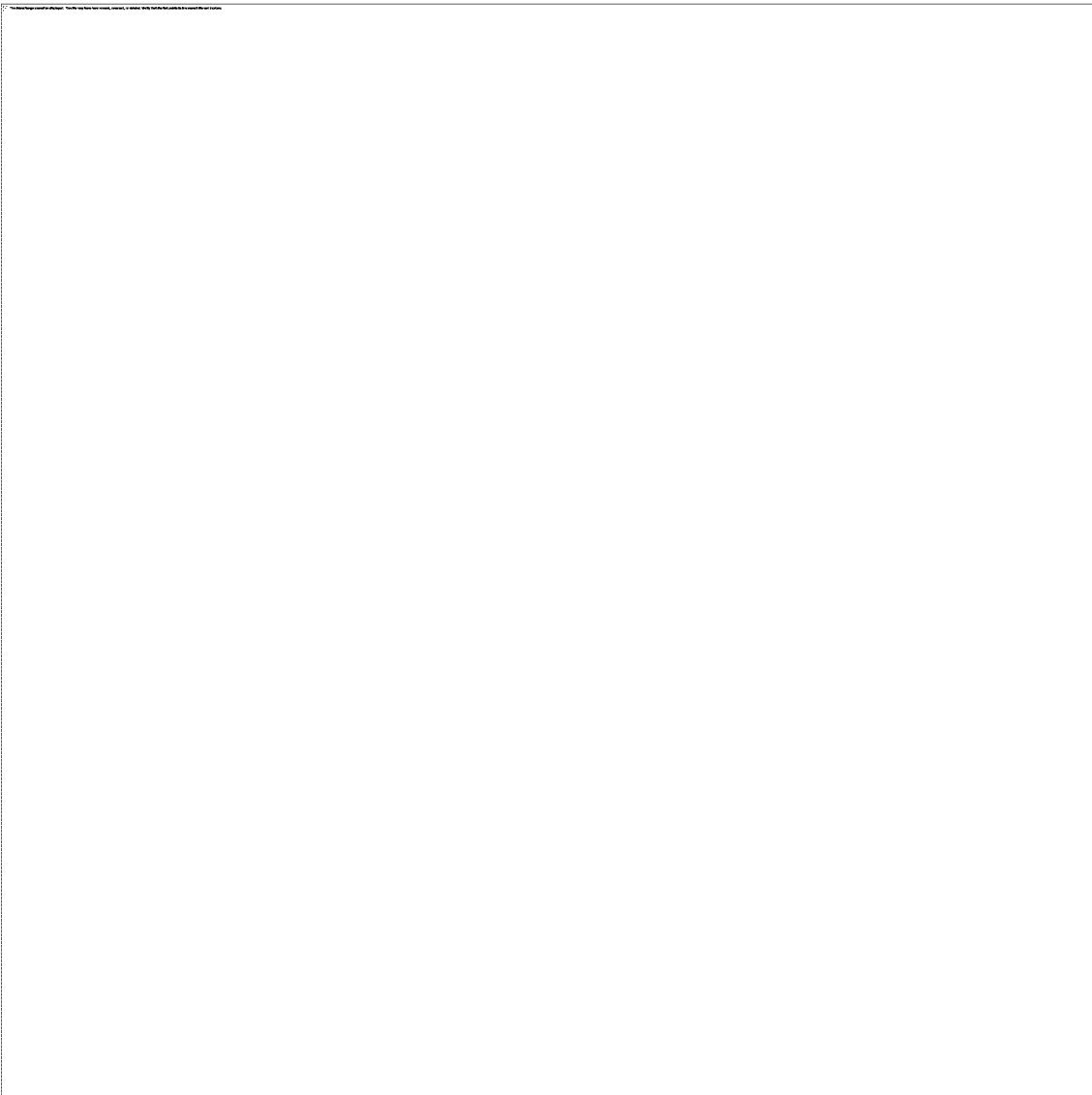
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The event will be webcast on the [Climate Conversations webpage](#), which also includes participant biographies. Closed captioning will be provided.

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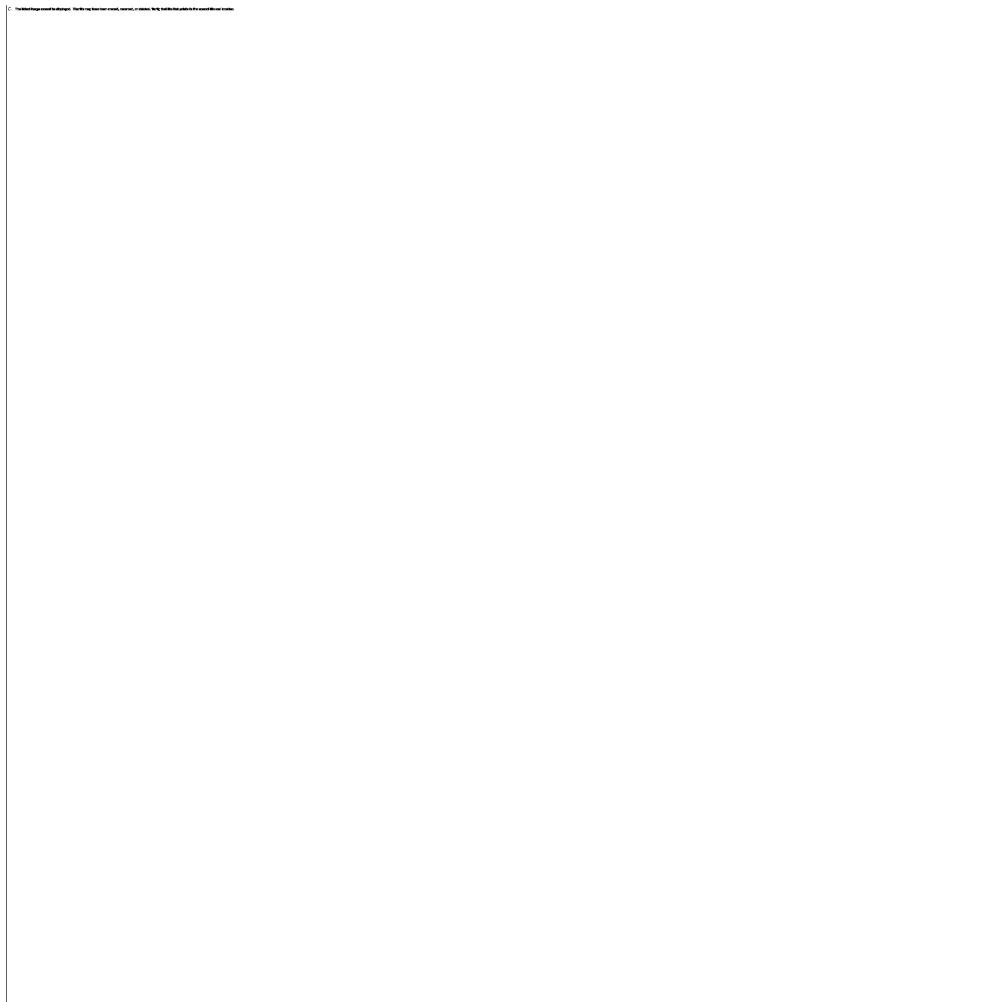
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Upcoming Webinar

Climate Conversations: Decarbonization

February 18, 2021 | 3:00-4:00 PM EST

Join us for a conversation about what it means to decarbonize, and about quick and equitable actions to put the United States on a path to net-zero emissions by 2050.

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Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

For the inaugural webinar, Mariette DiChristina (Boston University) will be facilitating a conversation with Ben Preston (RAND) and Steve Pacala (Princeton University) about the most actionable opportunities for decarbonization in the United States. The webinar will include discussion of the National Academies new report, [Accelerating Decarbonization of the United States Energy System](#), which was chaired by Dr. Pacala.

Participants:

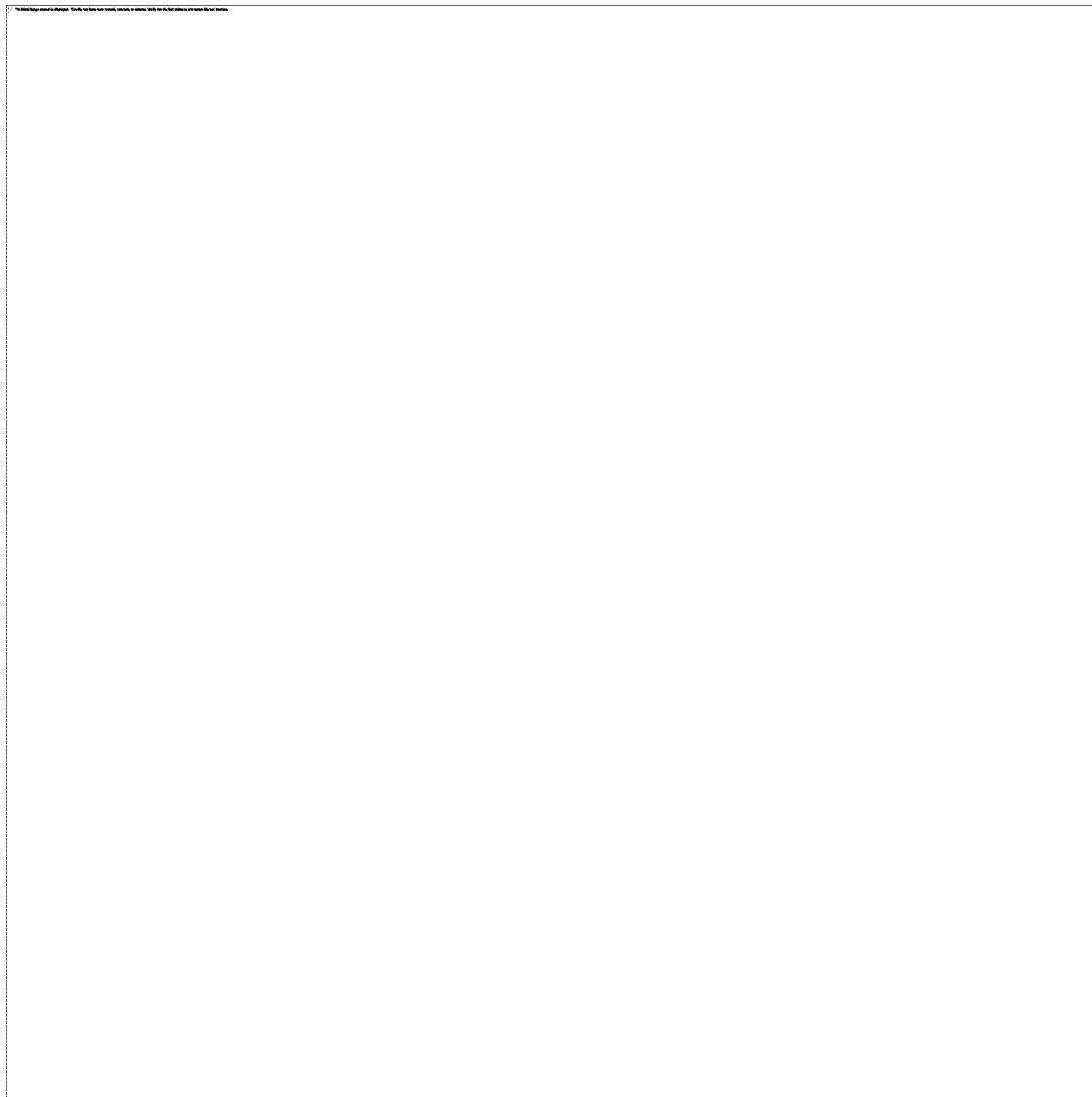
Stephen W. Pacala is the Frederick D. Petrie Professor of Ecology and Evolutionary Biology at Princeton University, where he directs the Carbon Mitigation Initiative. He is the Chair of the National Academies Committee on Accelerating Decarbonization in the United States: Technological, Policy, and Societal Dimensions.

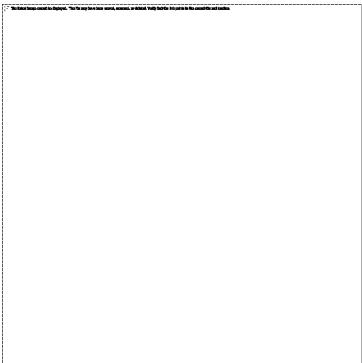
Benjamin Preston is a senior policy researcher at the RAND Corporation and director of Community Health and Environmental Policy, a program of RAND Social and Economic Well-Being, and currently serves as coeditor-in-chief for the

Elsevier journal Climate Risk Management.

Mariette DiChristina is the dean of the College of Communication at Boston University and a nationally recognized science journalist, most recently as editor-in-chief and executive vice president of Scientific American.

The event will be webcast on the [Climate Conversations webpage](#). Closed captioning will be provided. Details about additional webinars will be posted soon.





E

Negative Emissions Technologies and Reliable Sequestration: A Research Agenda

To achieve goals for climate and economic growth, “negative emissions technologies” (NETs) that remove and sequester carbon dioxide from the air will need to play a significant role in mitigating climate change. Unlike carbon capture and ...

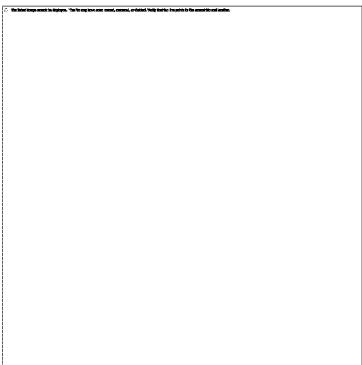
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Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide

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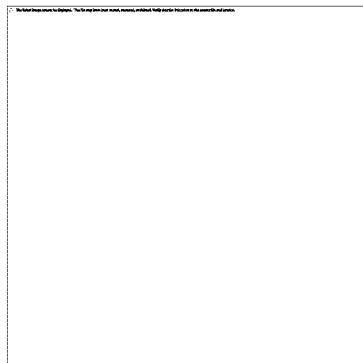
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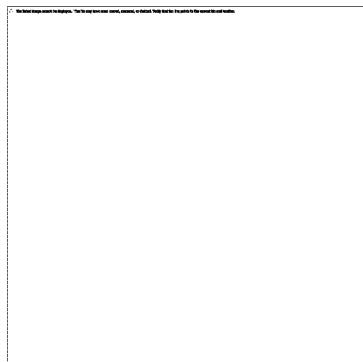
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Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia

Emissions of carbon dioxide from the burning of fossil fuels have ushered in a new epoch where human activities will largely determine the evolution of Earth's climate. Because carbon dioxide in the atmosphere is long lived, it can effectively ...

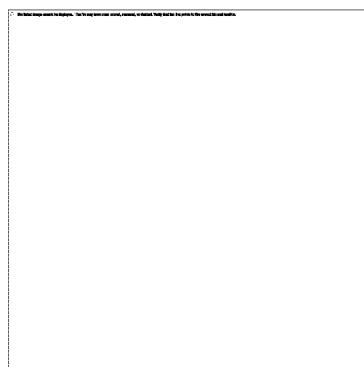
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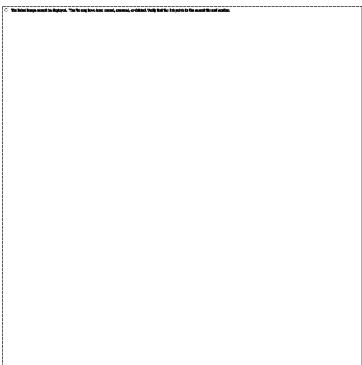
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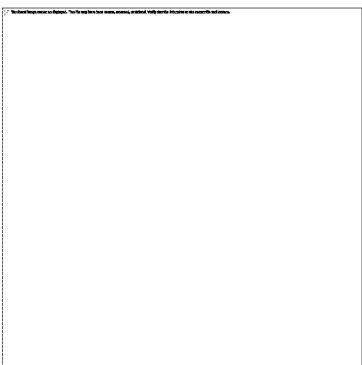


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The Power of Change: Innovation for Development and Deployment of Increasingly Clean Electric Power Technologies

Electricity, supplied reliably and affordably, is foundational to the U.S. economy and is utterly indispensable to modern society. However, emissions resulting from many forms of electricity generation create environmental risks that could have ...

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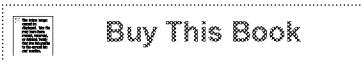


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Climate Change: Evidence and Causes: Update 2020

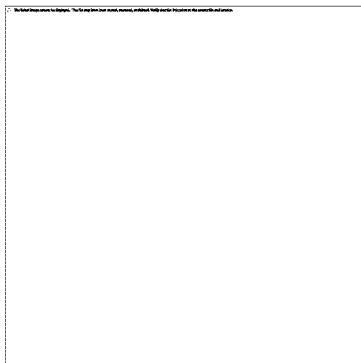
Climate change is one of the defining issues of our time. It is now more certain than ever, based on many lines of evidence, that humans are changing Earth's climate. The Royal Society and the US National Academy of Sciences, with their similar ...

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Climate change is occurring. It is very likely caused by the emission of greenhouse gases from human activities, and poses significant risks for a range of human and natural systems. And these emissions continue to increase, which will result in ...

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April 19, 2021

IN THIS ISSUE:

- EVENT: National Academy of Sciences 158th Annual Meeting—Saturday-Sunday, April 24-25
- NOBEL PRIZE SUMMIT: Our Planet, Our Future—April 26-28
- WEBINAR SERIES: Earth Resources for the Energy Transition —April 26, May 17, and June 1
- WEBINAR: Climate Conversations: Solar Geoengineering —May 20

- [IN CASE YOU MISSED IT: Climate Conversations: The Cost of Carbon](#)
 - [WORKSHOP: The Chemistry of Urban Wildfires: An Information-Gathering Session—June 8](#)
 - [WORKSHOP: How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health— July 13, 16, and 21](#)
-



ONLINE EVENT

National Academy of Sciences 158th Annual Meeting

Saturday-Sunday, April 24-25

The NAS annual meeting takes place each year in April in Washington, DC. Highlights from each meeting include the induction of members elected the previous year, the presentation of awards recognizing outstanding contributions to science, a scientific program that features discussions on a wide-range of topics, and the election of members, both U.S. and international.

[**View the Public Program**](#)

NOBEL PRIZE SUMMIT
Our Planet, Our Future
April 26-28, 2021

Inspired by Alfred Nobel's belief in celebrating achievements that contribute "the greatest benefit to humankind," the Nobel Foundation, the U.S. National Academy of Sciences, and the Potsdam Institute for Climate Impact Research/Stockholm Resilience Centre invite you to engage in an optimistic exploration of the best version of our collective future. The first Nobel Prize Summit will convene talks from Nobel laureates and conversations among experts from the science, policy, arts, and youth activist communities. It will bring together the world's brightest and most creative thinkers to focus on three key areas critical to the future of humanity:

Climate Change and Biodiversity Loss
Reducing Inequality
Technologies with the Power to Transform the Way We Live and Work

Informed by lessons learned during the course of the COVID-19 pandemic, it is clear that solving these challenges must be guided by an inclusive vision for our shared future – one that is grounded in science and that safeguards our global commons.

This free, online summit is a global platform for the exchange of ideas and the source of change-making approaches that will engage and entertain, motivate and embolden. Special performances by world-class artists combined with opportunities for dialogue and networking sessions round out the summit experience.

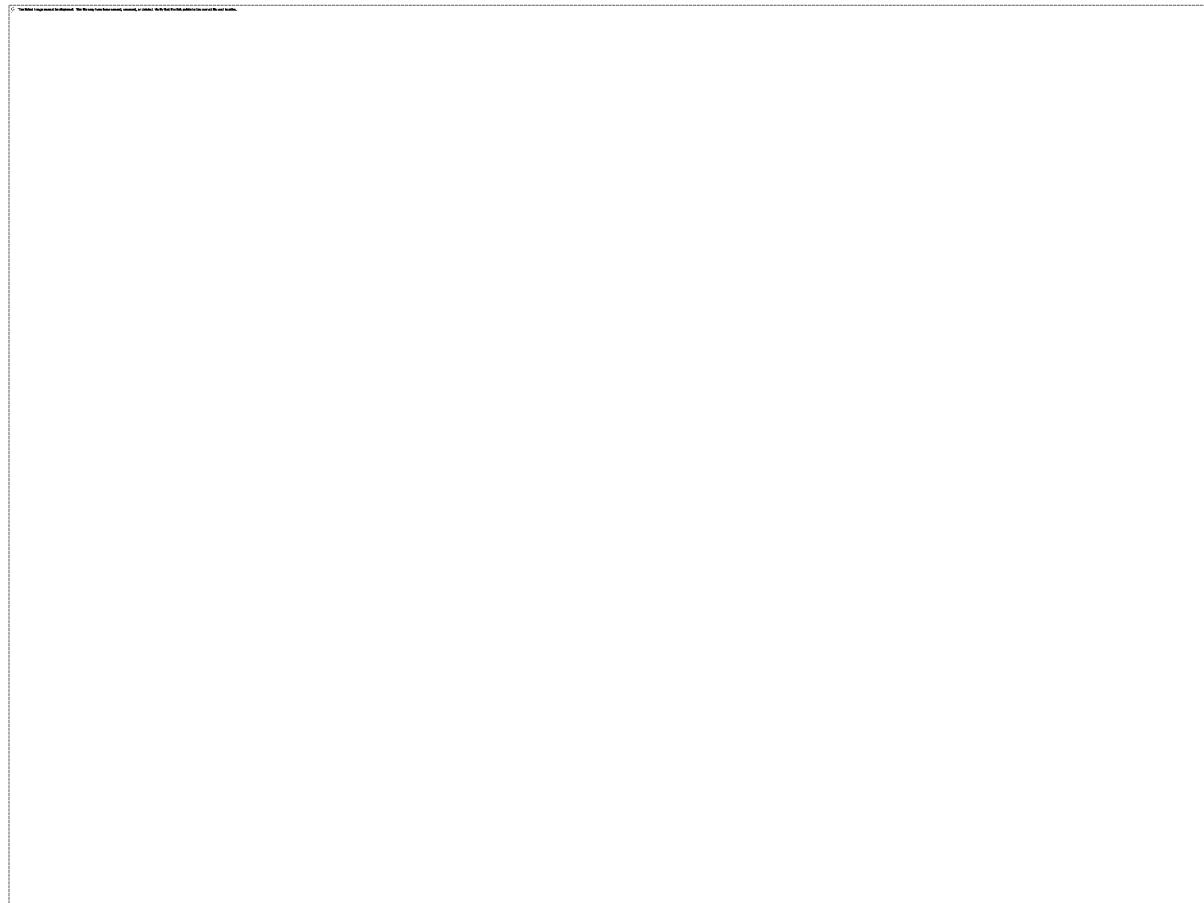
Our virtual auditorium is large but space is limited. Please RSVP for this unique mix of science, discussion, music, theatre, and action.

Reserve Your Virtual Seat Today

Visit our website nobelprize.org/our-planet-our-future to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and to register for the virtual event.

Spread the word on your social channels: #NobelPrizeSummit

@nobelprize @theNASciences @PIK_Climate



WEBINAR SERIES

Earth Resources for the Energy Transition

Monday, April 26 | 1:00-3:00 PM ET

May 17 | 2:00-4:30 PM ET

Tuesday, June 1 | 2:00-4:30 PM ET

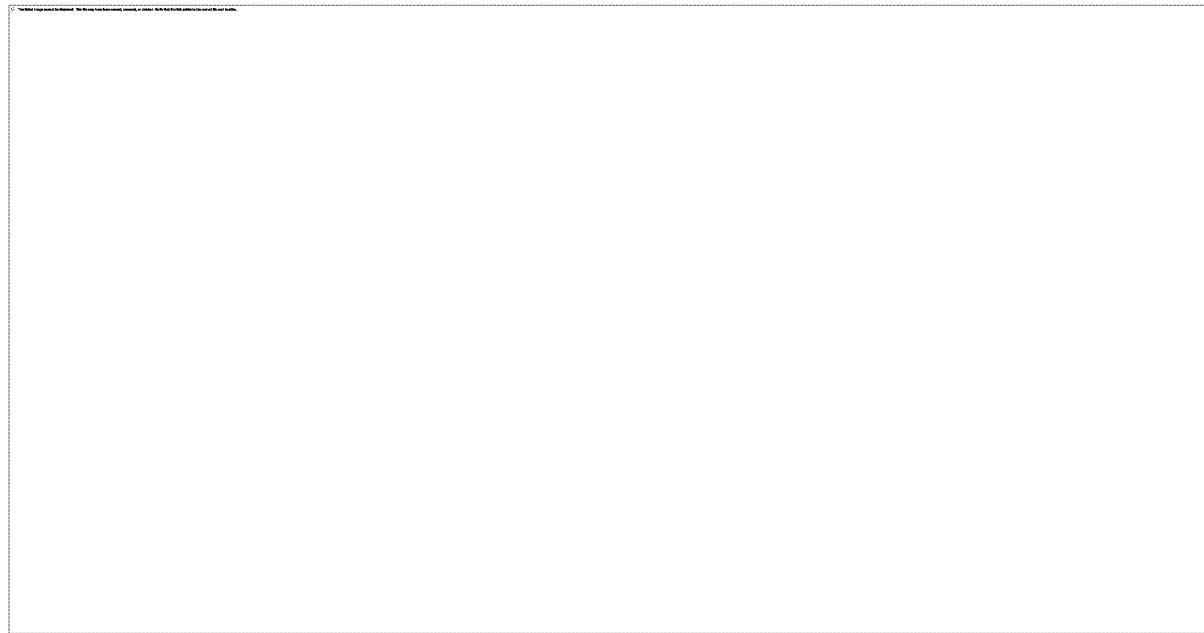
The primary energy systems that have supplied energy for transportation, industrial and agricultural production, community services, and municipal and individual uses have remained largely unchanged for decades in terms of the basic design of the electric grid and vehicular fleet but appear to be on the verge of a transformational change. The present energy transition will involve a shift in energy resources, generation, transmission, and use toward a low-carbon emissions energy system. The future is likely to be represented by a range of energy sources such as wind and solar energy, geothermal energy, nuclear energy, and hydropower, in addition to more

sustainable uses of natural gas, oil, and coal. This meeting will explore the fundamental Earth resource needs for minerals that will determine the pace and scale of the energy transition in the U.S. and globally.

Earth resources such as rare earth elements, cobalt, nickel, lithium, copper, platinum group elements, graphite, and other constituents are fundamental components in solar panels, batteries, electric vehicles, mass energy storage, and other key structural parts of the energy transition. Earth resources, beyond fossil fuels, are thus essential to develop the next generation of energy systems and infrastructure to a scale that can reliably supply the entire nation's energy needs while balancing technical, economic, environmental, and policy considerations.

The first webinar, to be held **April 26 from 1:00 till 3:00 PM ET**, will provide an overview of what "critical minerals" are; the practical needs for minerals in a variety of energy systems and related infrastructure (e.g., solar panels, batteries, mass energy storage, electric cars); and the global and U.S. national (critical) mineral supply chains.

[Register to Attend](#)



WEBINAR

Climate Conversations: Solar Geoengineering

Thursday, May 20 | 3:00-4:00 PM ET

Join us for a conversation on the possible risks and benefits of solar geoengineering as part of a portfolio of responses to climate change.

Solar geoengineering refers to a set of possible strategies to help reduce global warming by increasing the amount of solar radiation reflected away from Earth. Frank Sesno (George Washington University) will moderate a conversation with Marcia McNutt (National Academy of Sciences) and Chris Field (Stanford University) about how and whether solar geoengineering should fit into broader efforts to address climate change, the role of research in helping inform decisions about implementation, and the complex global ethics and governance issues associated with solar geoengineering. The webinar will include discussion of the new National Academies report, *Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance*, which was chaired by Dr. Field.

The conversation will be webcast on the Climate Conversations webpage on **Thursday, May 20, 2021 from 3-4 pm ET**. Closed captioning will be provided.

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

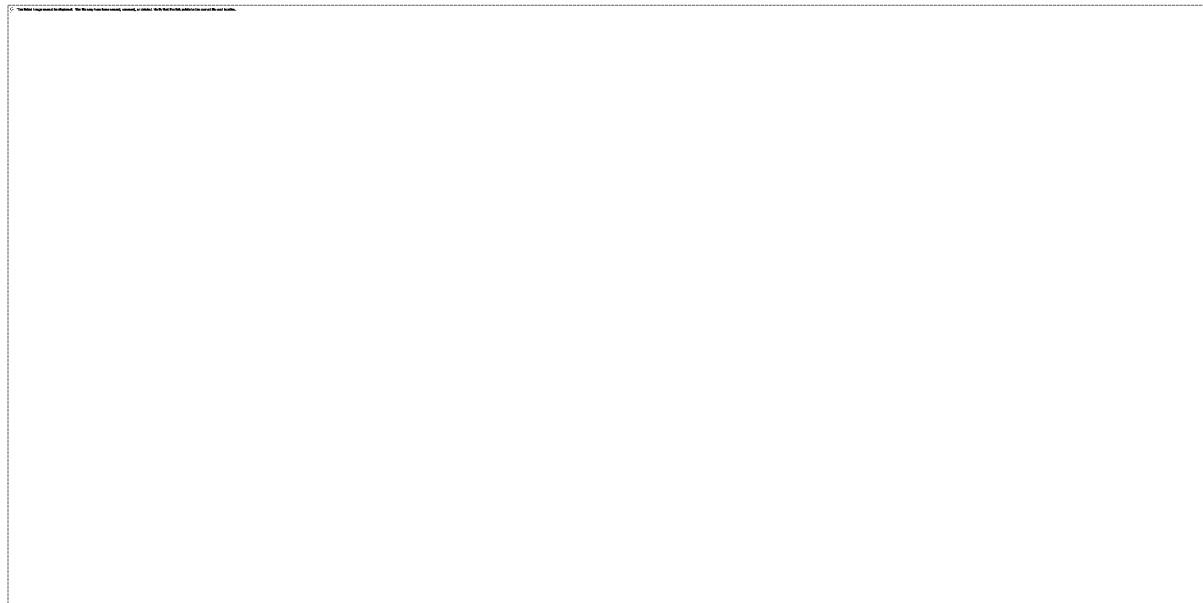
[Register to Attend](#)

In Case You Missed It:

Climate Conversations: The Cost of Carbon

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. In our April 15 Climate Conversation, Justin Worland (TIME) moderated a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation also touched on the social cost of other greenhouse gases.

[Watch the Conversation](#)



WORKSHOP

The Chemistry of Urban Wildfires: an Information-Gathering Session

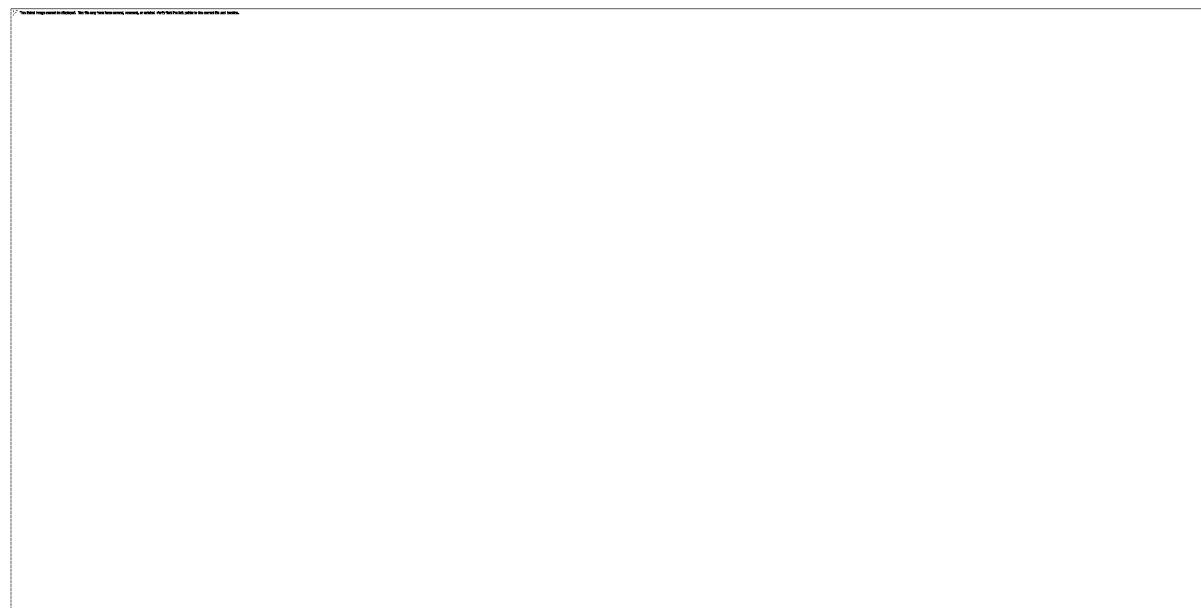
Tuesday, June 8 | 10:00 AM-5:00 PM EDT

How do fires at the wildland-urban interface (WUI) differ from wildland fires? And how does understanding these differences change how we mitigate fires and their impacts on families and communities?

The study [The Chemistry of Urban Wildfires](#) will examine these questions. Join us on Tuesday, June 8, 2021, for an all-day virtual information gathering workshop that will help inform the study committee as they develop recommendations for mitigating the impact of urban wildfires on the general public.

The specific goals of this workshop are to hear from leaders in the field in order to better understand (1) the composition of residential materials and their combustion products, (2) the sources of emissions and potential exposures, (3) the chemical processes involved, and (4) data gaps and research needs that remain.

[Register to Attend](#)



WORKSHOP

How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health

Tuesday, July 13, Friday, July 16, and Wednesday, July 21 | 11:30 AM-5:30 PM ET

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment. How does ridehailing affect air pollution in our communities? What are the environmental impacts of having packages delivered to our front door?

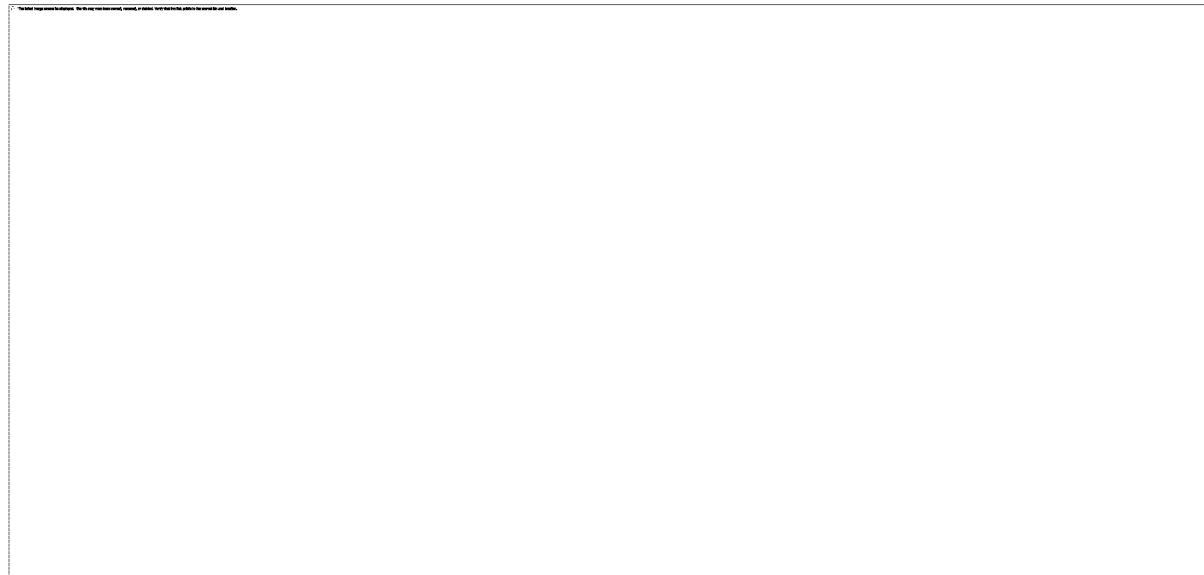
This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants

will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

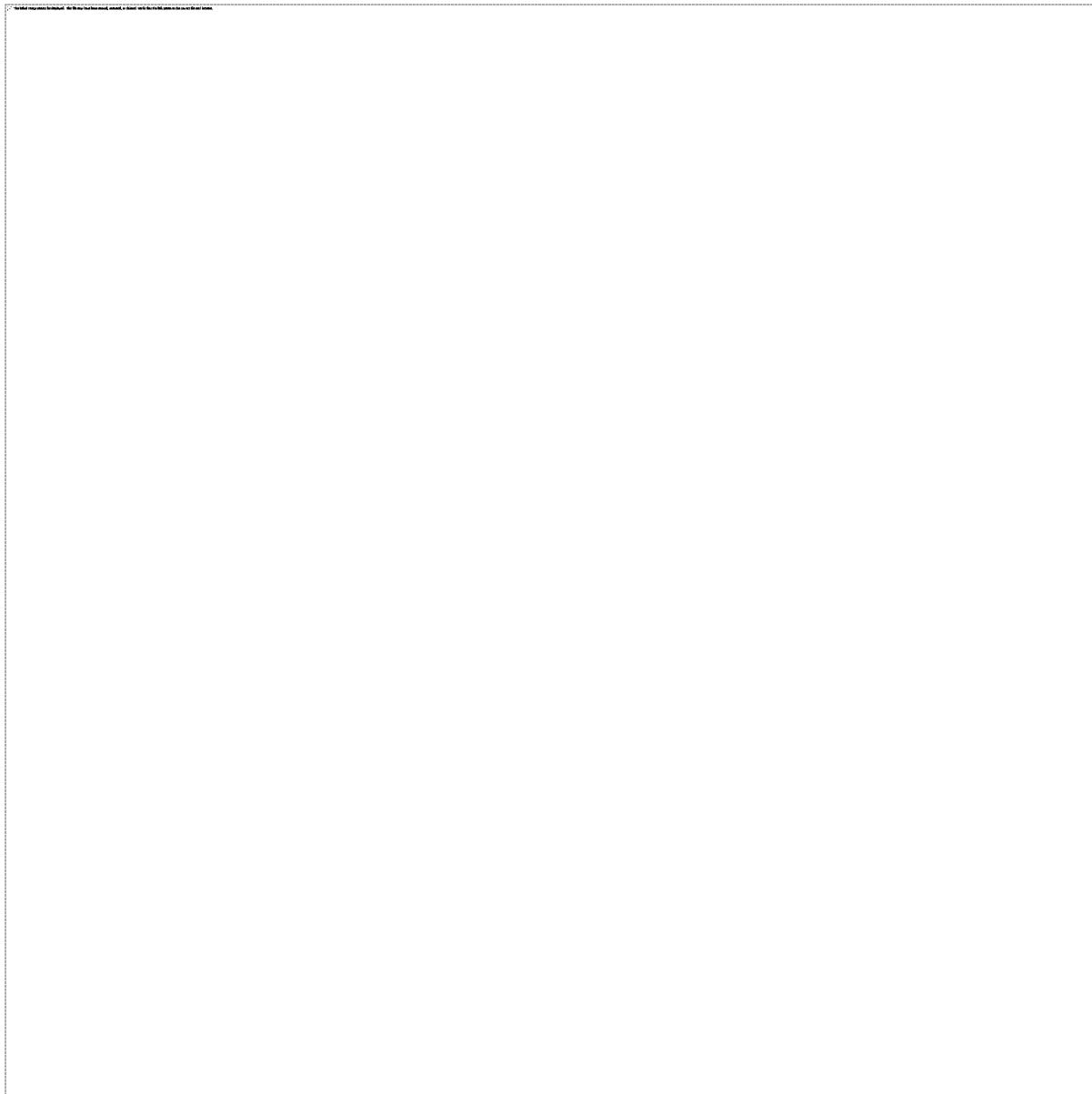
Workshop sessions will take place between 11:30 AM – 5:30 PM (ET) on July 13, 16, and 21, 2021. This workshop is public and free to attend.

More information, including the full agenda and speaker lineup, will be posted on [the event webpage](#) soon.

[Register to Attend](#)

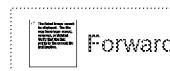
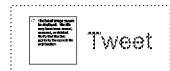


Explore Our Climate Resources



As evidence of a changing climate continues to make headlines, the National Academies has made it easier than ever to explore our wide-ranging resources on climate-related issues. Building on decades of work, we gather top experts to help the nation better understand, prepare for, and limit future climate change. Visit [Climate at the National Academies](#) for more about our upcoming events, current work, and existing resources.

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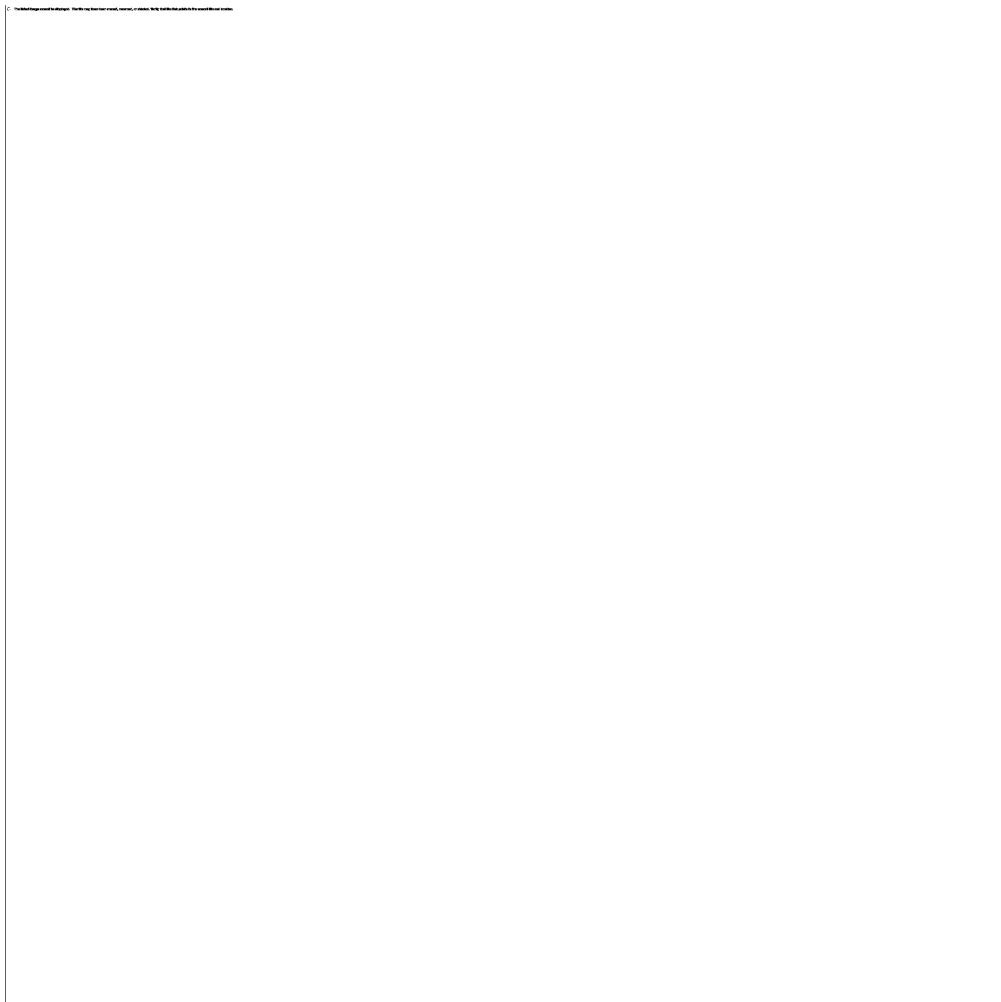
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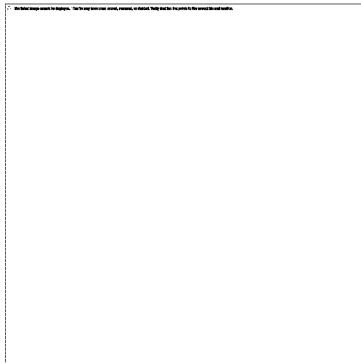
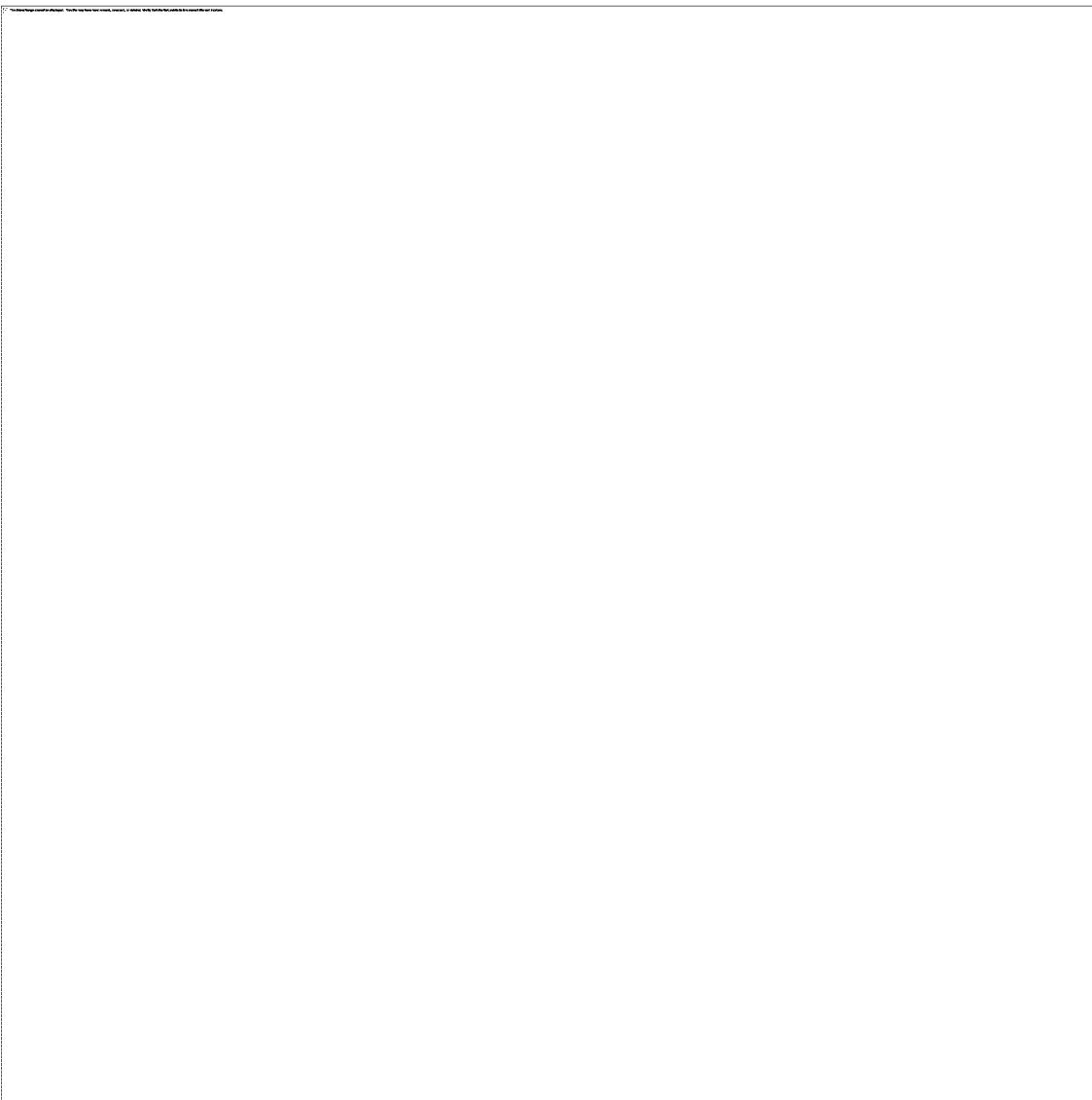
TOMORROW, April 15, 2021 | 3:00-4:00 PM ET

*Join us for a virtual conversation about the social cost of carbon
and equitable climate policy in the United States.*

[Register Now](#)

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change. Closed captioning will be provided.



Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide

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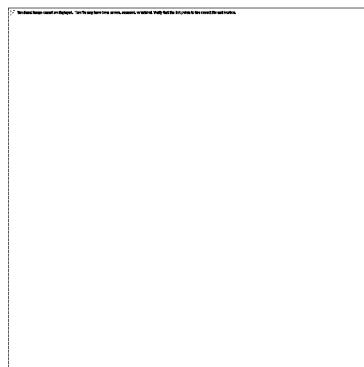
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Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update

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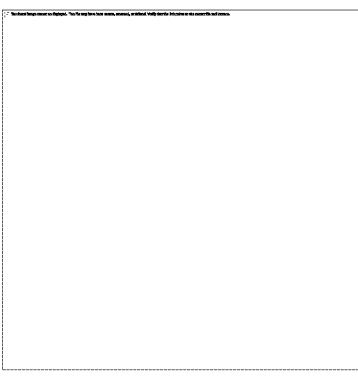


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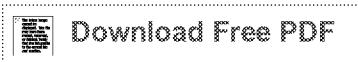


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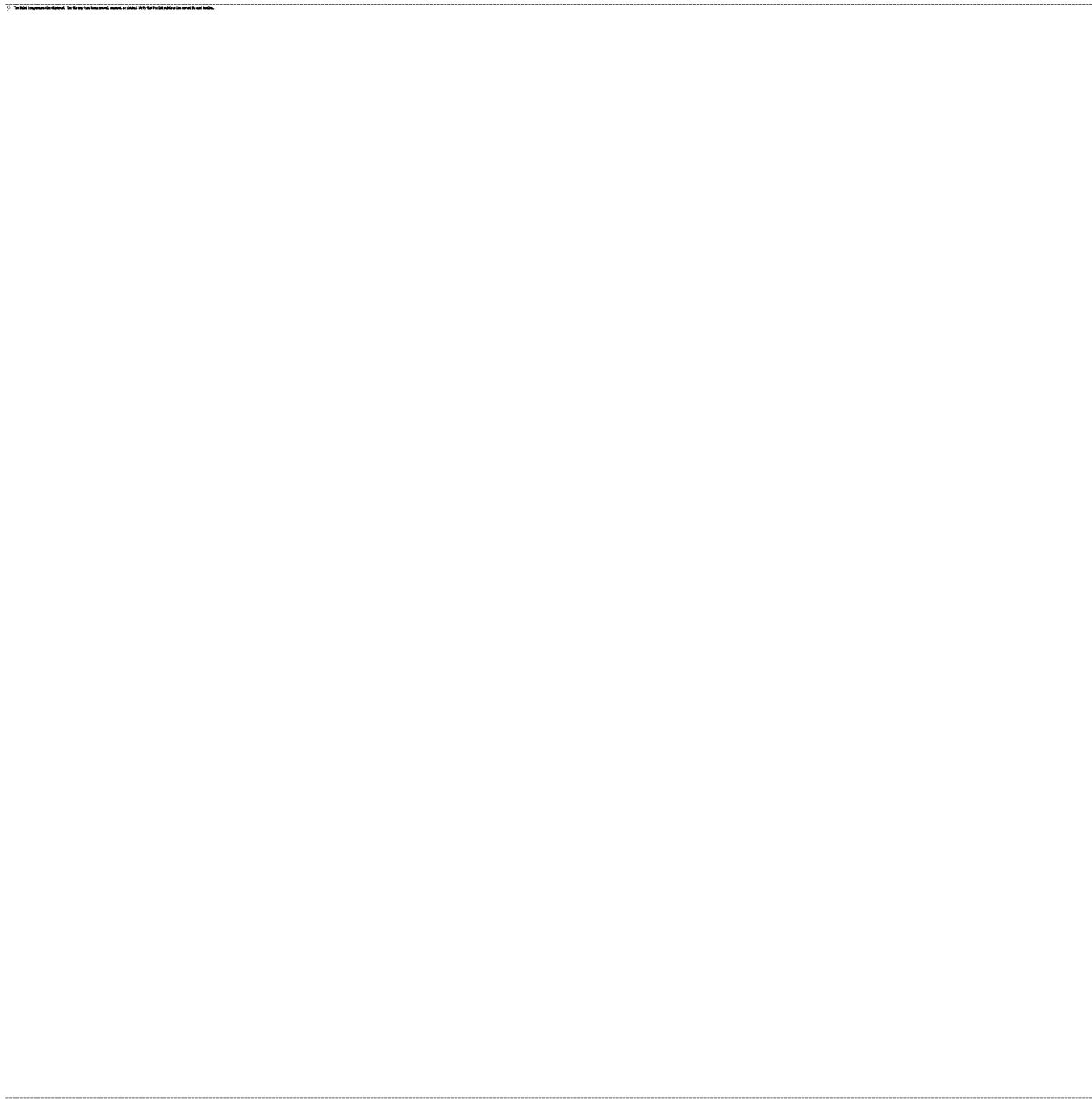
An Update on Public Transportation's Impacts on Greenhouse Gas Emissions

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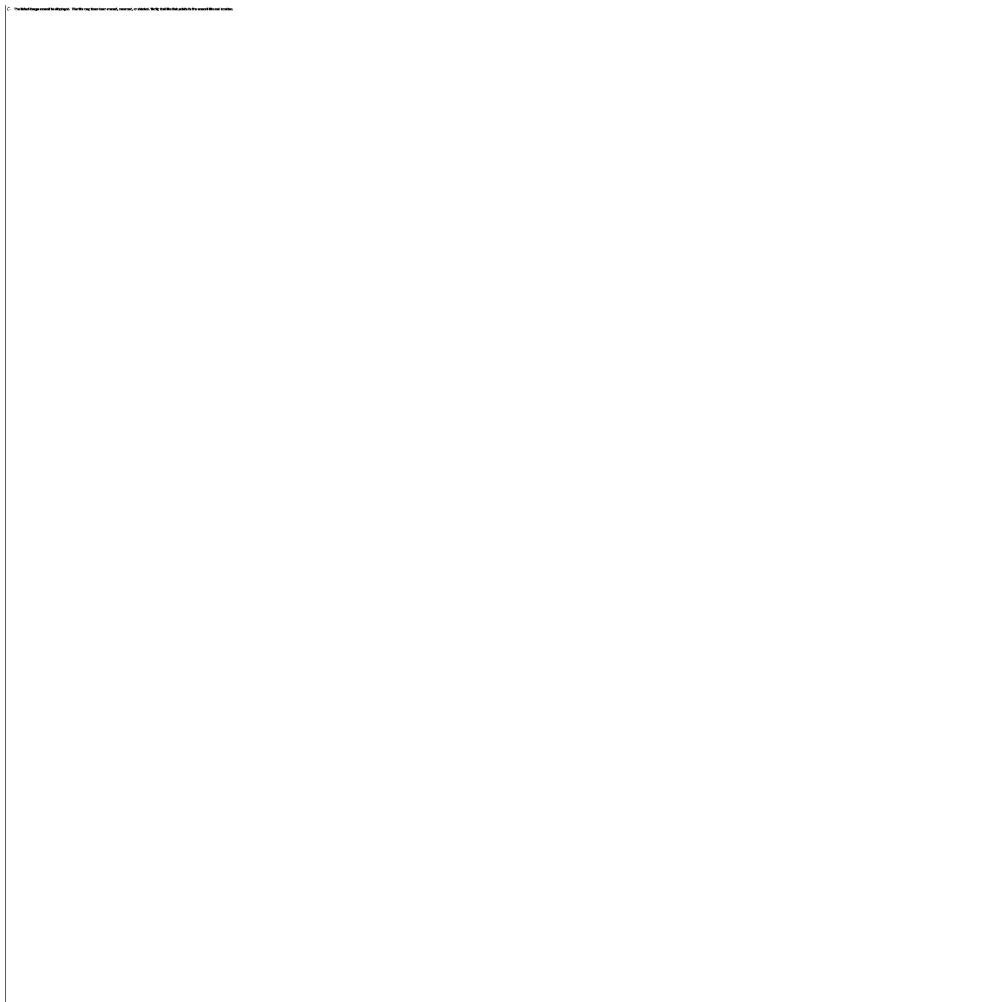
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Upcoming Climate Conversations Webinar

Climate & COVID-19

March 18, 2021 | 3:00-4:00 PM EDT

[Register Now](#)

Join us for a conversation about the climate crisis and COVID-19 pandemic, and steps to a more resilient and equitable future.

Almost exactly one year after U.S. COVID-19 lockdowns began, Laura Helmuth (Scientific American) will moderate a [conversation](#) between Georges Benjamin (APHA) and Kristie Ebi (University of Washington) that is both reflective about the intersections between climate change and COVID-19 over the last year, and forward-looking at the state of progress on addressing these issues in the U.S.

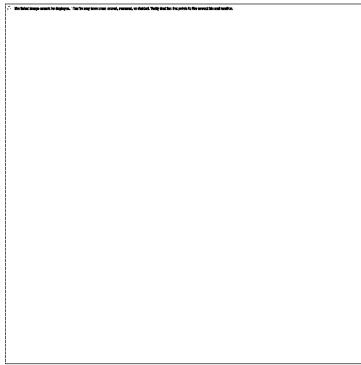
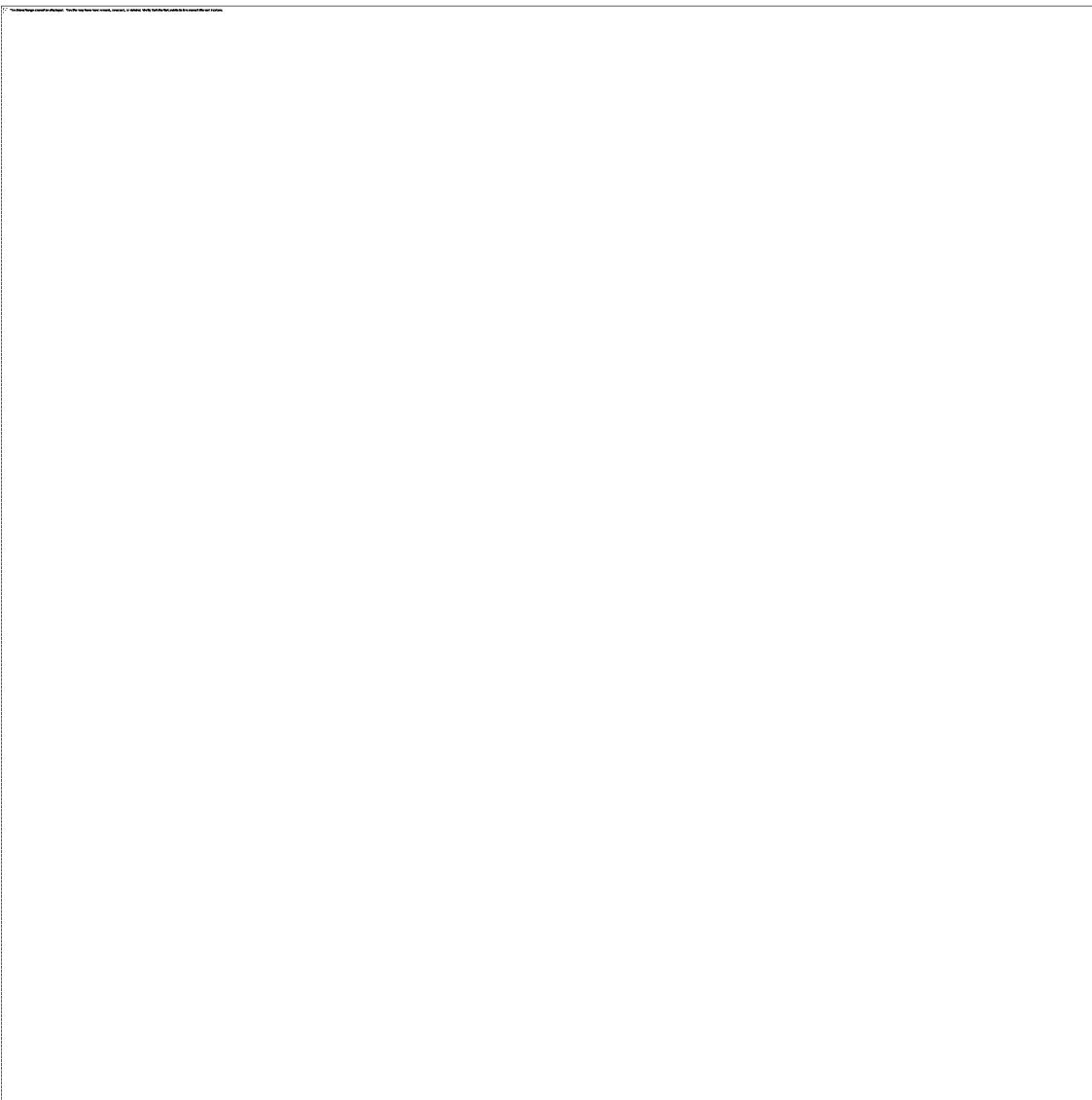
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Participant Bios

Georges Benjamin has served as the executive director of the American Public Health Association, the nation's oldest and largest organization of public health professionals, since December 2002. Well known as a health leader, practitioner, and administrator, he is a former secretary of health for the State of Maryland.

Kristie L. Ebi is a Professor in the Department of Global Health and in the Department of Environmental and Occupational Health Sciences at the University of Washington. She conducts research on the impacts of and adaptation to climate change, including on extreme events, thermal stress, foodborne safety and security, waterborne diseases, and vectorborne diseases.

Laura Helmuth is the Editor-in-Chief of Scientific American. Previously, she was The Washington Post's Science and Health Editor and president of the National Association of Science Writers.



Climate Change: Evidence and Causes: Update 2020

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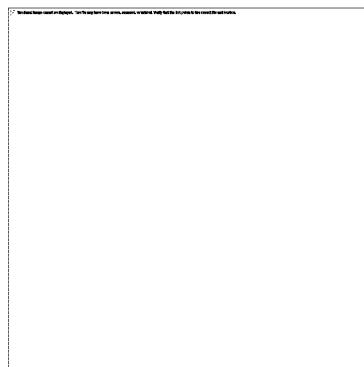
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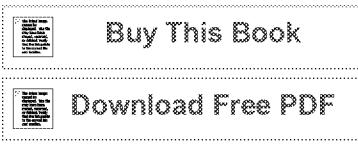


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Rapid Expert Consultations on the COVID-19 Pandemic: March 14, 2020-April 8, 2020

In response to a request from the Office of Science and Technology Policy and the Office of the Assistant Secretary for Preparedness and Response, the National Academies of Sciences, Engineering, and Medicine convened a standing committee of ...

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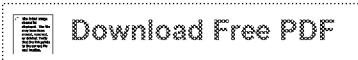


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Discussion Draft of the Preliminary Framework for Equitable Allocation of COVID-19 Vaccine

On September 1, 2020, the National Academies of Sciences, Engineering, and Medicine invited public comment on the Discussion Draft of the Preliminary Framework for Equitable Allocation of COVID-19 Vaccine, commissioned by the Centers for Disease ...

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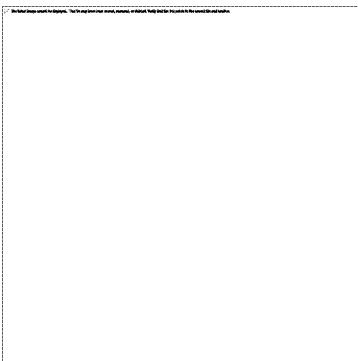
Airborne Transmission of SARS-CoV-2: Proceedings of a Workshop—in Brief

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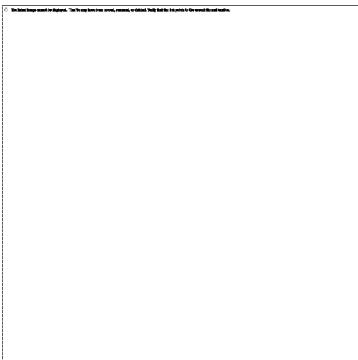
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America's Climate Choices

Climate change is occurring. It is very likely caused by the emission of greenhouse gases from human activities, and poses significant risks for a range of human and natural systems. And these emissions continue to increase, which will result in ...

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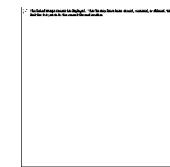


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Subject: News from NASEM Climate -- April 26, 2021



April 26, 2021

IN THIS ISSUE

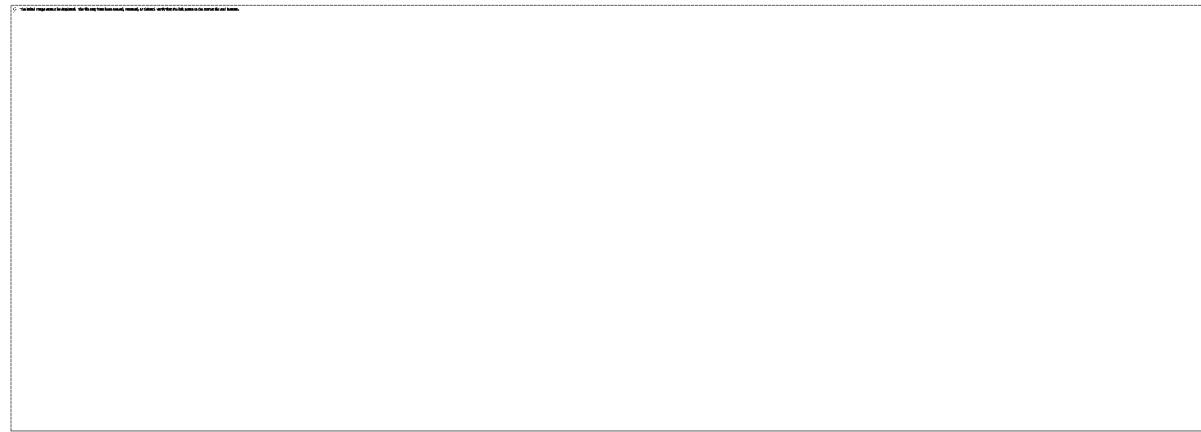
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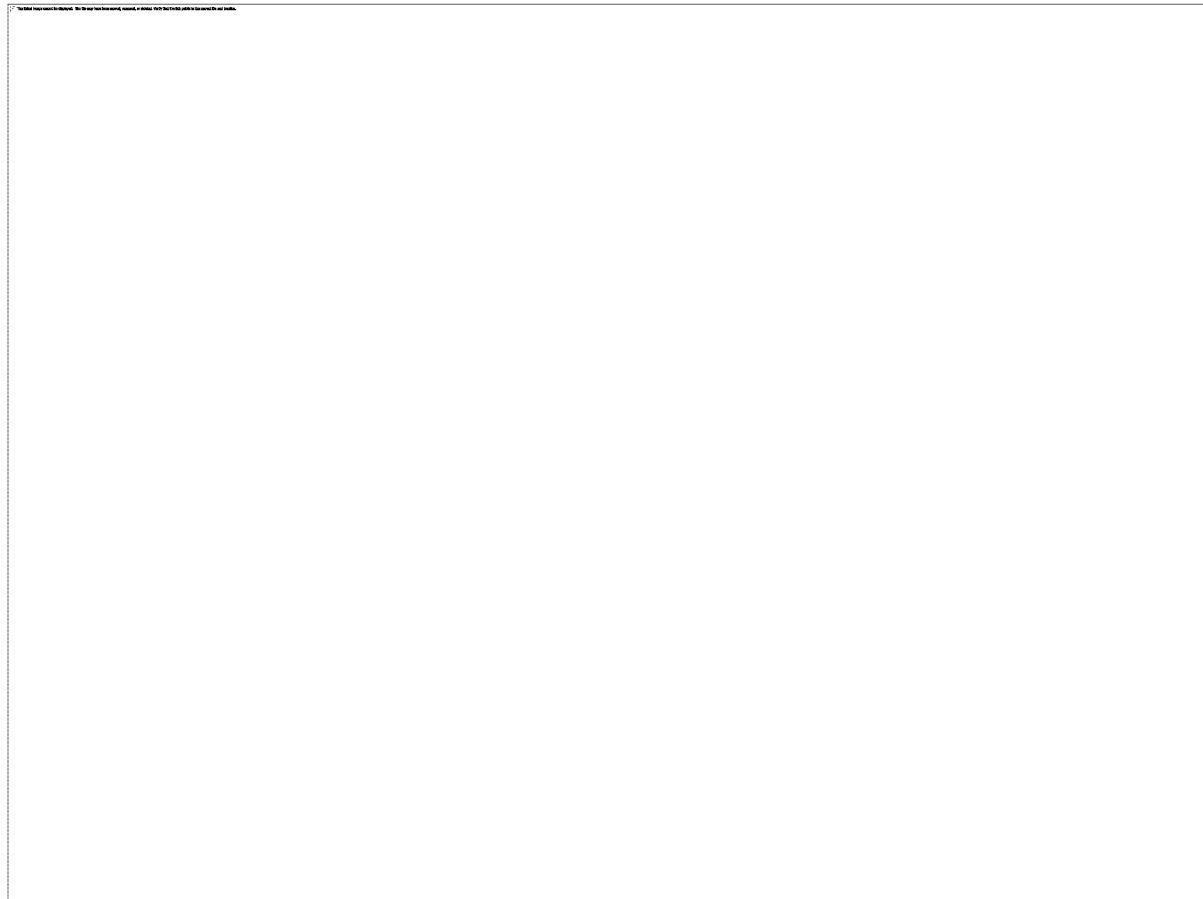
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Spread the word on your social channels: #NobelPrizeSummit

@nobelprize @theNASciences @PIK_Climate



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Tuesday, June 1 | 2:00-4:30 PM ET

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Earth resources such as rare earth elements, cobalt, nickel, lithium, copper, platinum group elements, graphite, and other constituents are fundamental components in solar panels, batteries, electric vehicles, mass energy storage, and other key structural parts of the energy transition. Earth resources, beyond fossil fuels, are thus essential to develop the next generation of energy systems and infrastructure to a scale that can reliably supply the entire nation's energy needs while balancing technical, economic, environmental, and policy considerations.

The first webinar, to be held **April 26 from 1:00 till 3:00 PM ET**, will provide an overview of what "critical minerals" are; the practical needs for minerals in a variety of energy systems and related infrastructure (e.g., solar panels, batteries, mass energy storage, electric cars); and the global and U.S. national (critical) mineral supply chains.

[Register to Attend](#)



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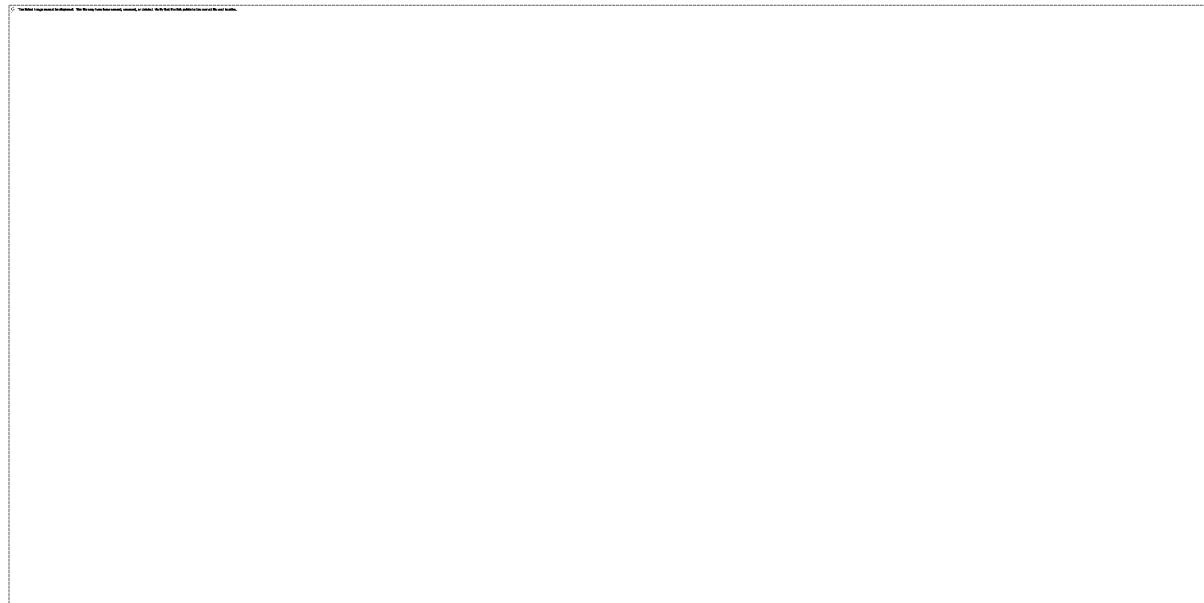
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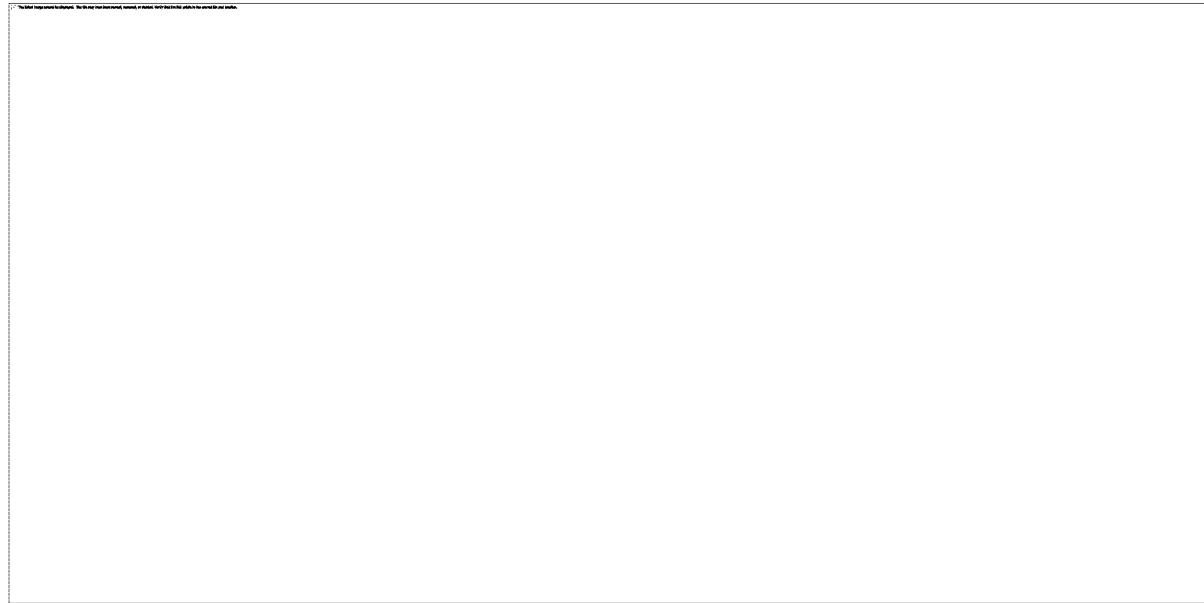
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The Friday, May 21, 2021, virtual event will take place from 11 AM to 4:45 PM ET on ZoomGov. If you would like to learn more about the study, [please visit the website](#).

Register to Attend



WORKSHOP

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Tuesday, July 13; Friday, July 16; Wednesday, July 21 | 11:30 AM-5:30 PM ET

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment. How does ridehailing affect air pollution in our communities? What are the environmental impacts of having packages delivered to our front door?

This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

Workshop sessions will take place between 11:30 AM – 5:30 PM (ET) on July 13, 16, and 21, 2021. This workshop is public and free to attend.

More information, including the full agenda and speaker lineup, will be posted on [the event webpage](#) soon.

[Register to Attend](#)

WORKSHOP

Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research

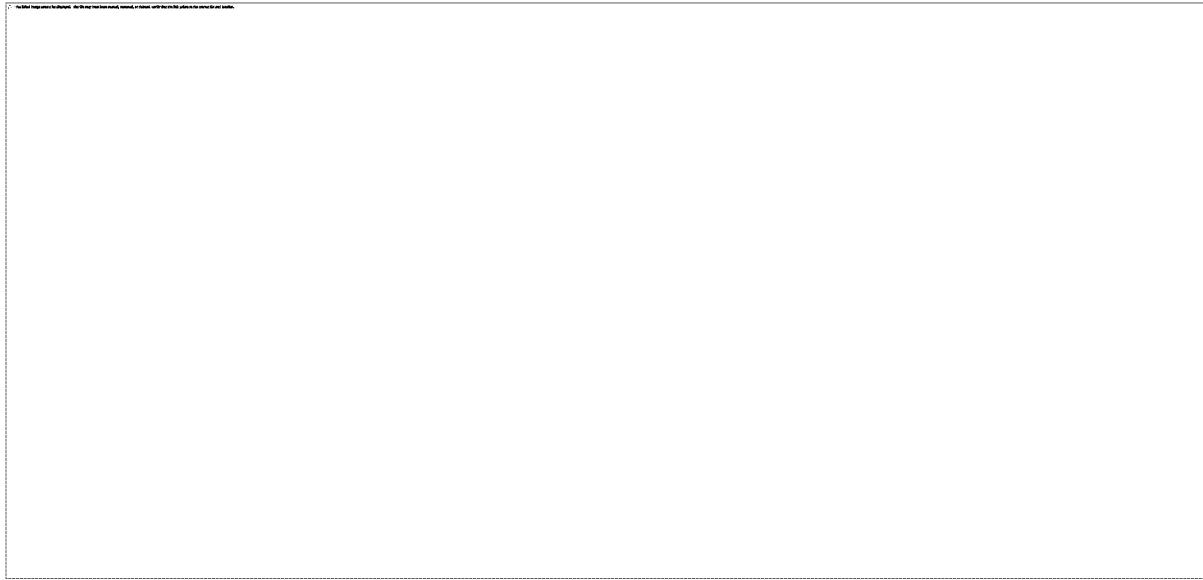
June 21-23, 2021

12:00 pm – 5:00 pm ET each day

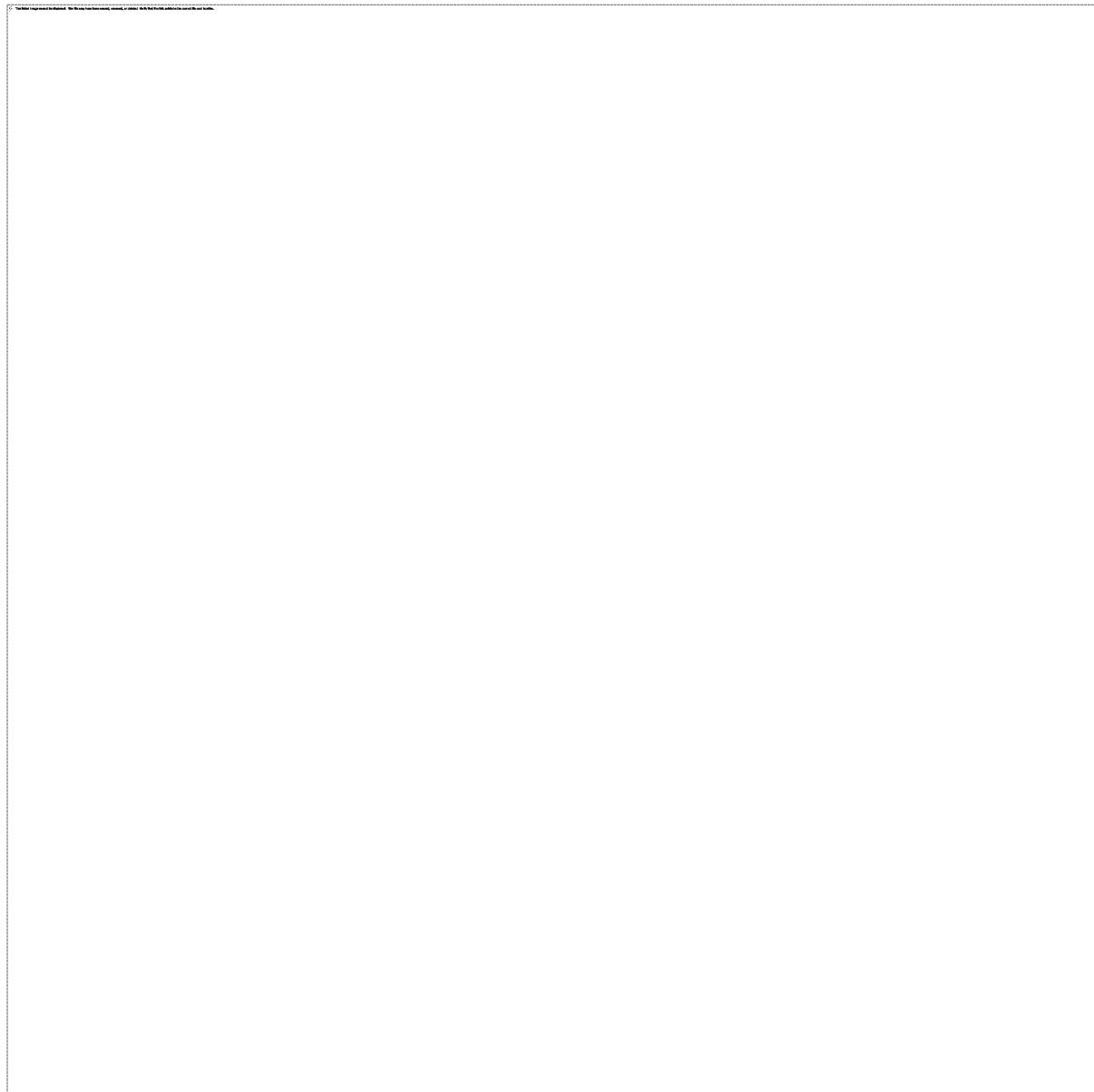
Please join us on June 21-23, 2021 for a virtual workshop on [Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research](#). The workshop seeks to identify potential future paleoclimate research directions that will help advance understanding of current and future change in the Earth's climate system. Drawing upon broad community input collected via an online questionnaire, workshop discussions will address gaps in our current understanding of past climate variability and processes, and new research strategies and technological capabilities that could practically be undertaken to effectively fill these knowledge gaps. Details on workshop goals and planning committee members can be found [on our website](#) (agenda and additional details are forthcoming).

Your participation is critical to ensure that the workshop reflects the priorities of the broad paleoclimate research community.

[Register to Attend](#)

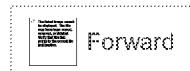
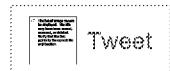


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As evidence of a changing climate continues to make headlines, the National Academies has made it easier than ever to explore our wide-ranging resources on climate-related issues. Building on decades of work, we gather top experts to help the nation better understand, prepare for, and limit future climate change. Visit [Climate at the National Academies](#) for more about our upcoming events, current work, and existing resources.

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The Cost of Carbon and Nobel Summit: Upcoming Energy Events at the National Academies

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Energy and Environmental Systems

Upcoming Energy Activities at the National Academies

- Climate Conversation: The Cost of Carbon (see below)
April 15 from 3-4pm ET | [Register](#)
- Nobel Prize Summit: Our Planet, Our Future (see below)
April 26-28 | [Register](#)

CLIMATE CONVERSATION ON APRIL 15 AT 3PM ET

The Cost of Carbon

Please join us on **Thursday, April 15, 2021 from 3-4pm ET** for a [conversation](#) about the social cost of carbon and equitable climate policy in the United States. During the event, Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

Register to Attend

NOBEL PRIZE SUMMIT ON APRIL 26-28 Our Planet, Our Future

Join the Nobel Foundation, the U.S. National Academy of Sciences, and the Potsdam Institute for Climate Impact Research/Stockholm Resilience Centre for the first [Nobel Prize Summit on April 26-28, 2021](#). The summit will feature talks from Nobel laureates and conversations among experts from the science, policy, arts, and youth activist communities with a focus on:

- Climate Change and Biodiversity Loss
- Reducing Inequality
- Technologies with the Power to Transform the Way We Live and Work

The summit will include special performances by world-class artists combined with opportunities for dialogue and networking sessions. Visit the [event website](#) to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and to register for the virtual event.

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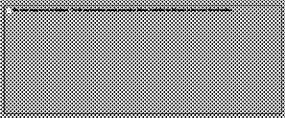
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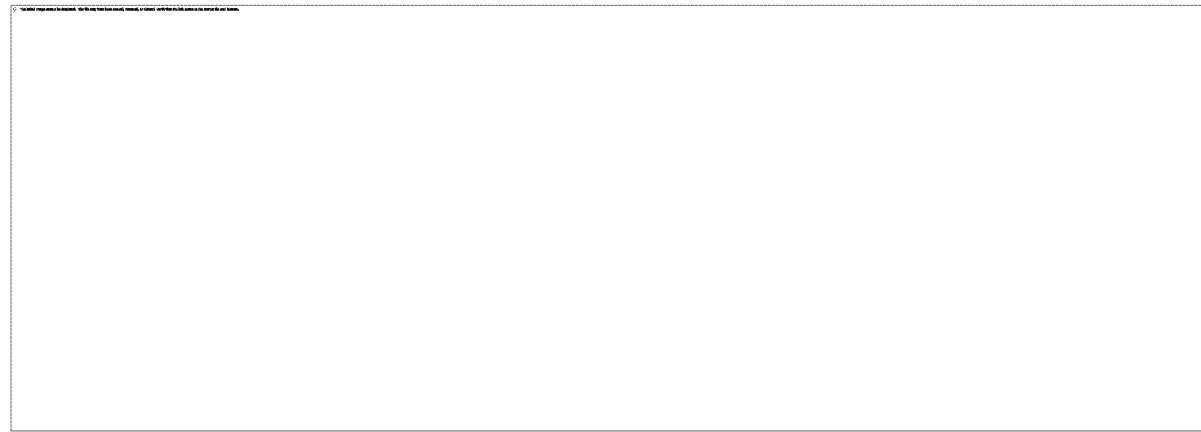
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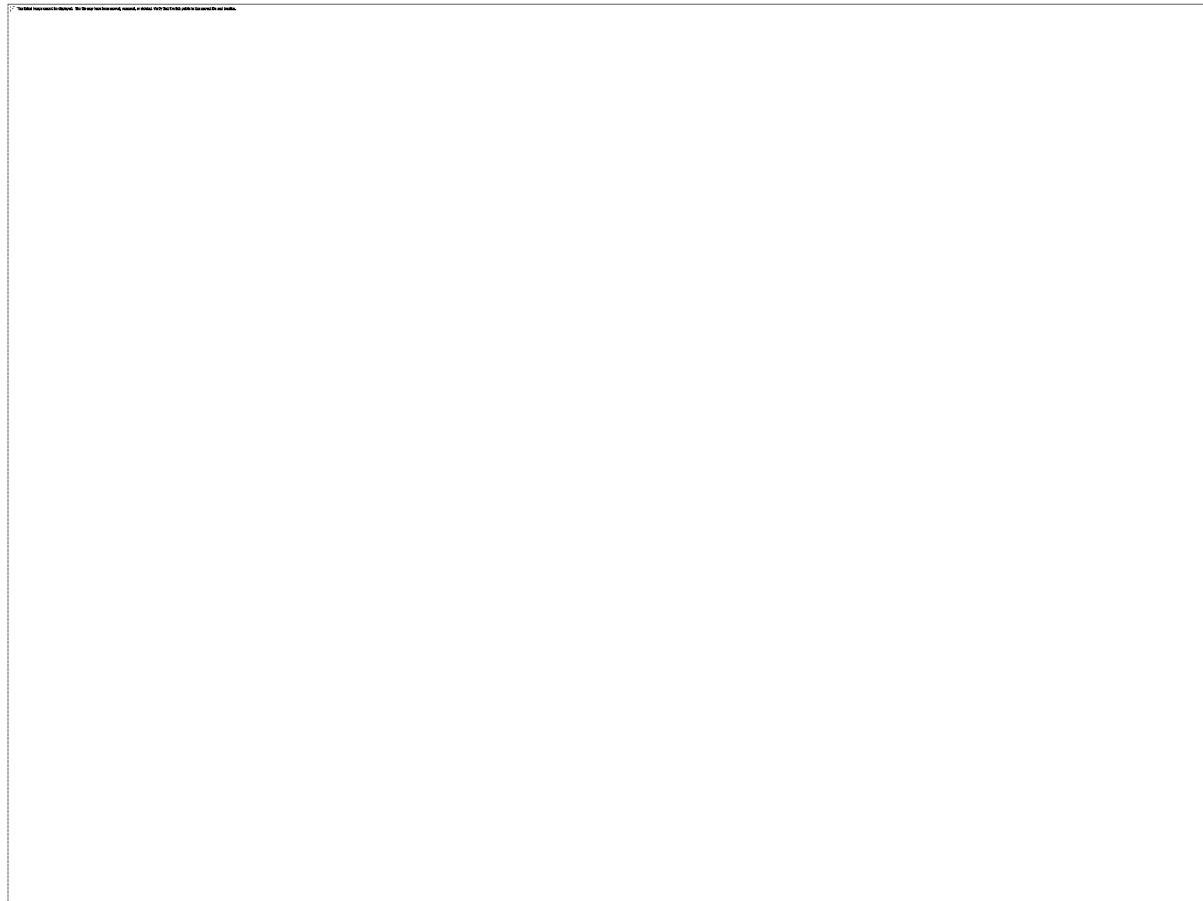
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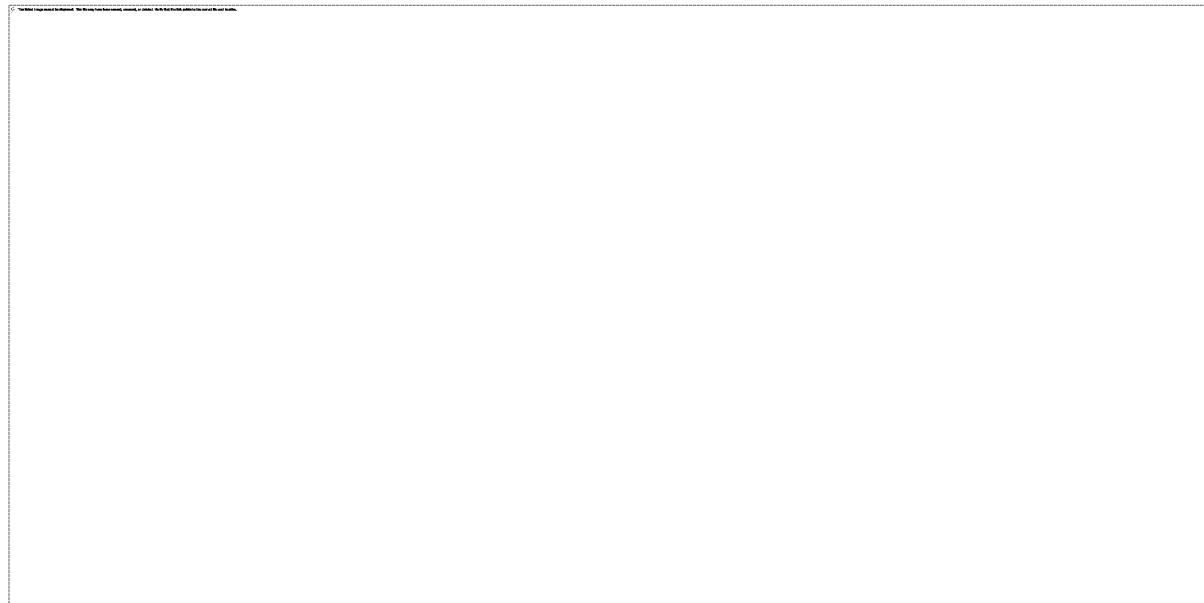
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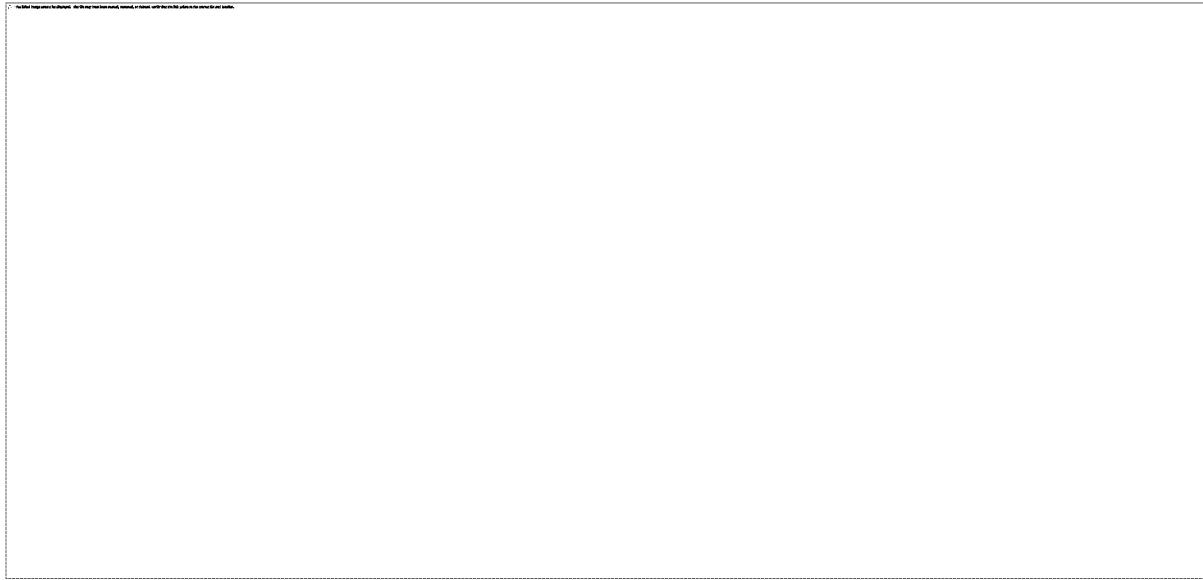
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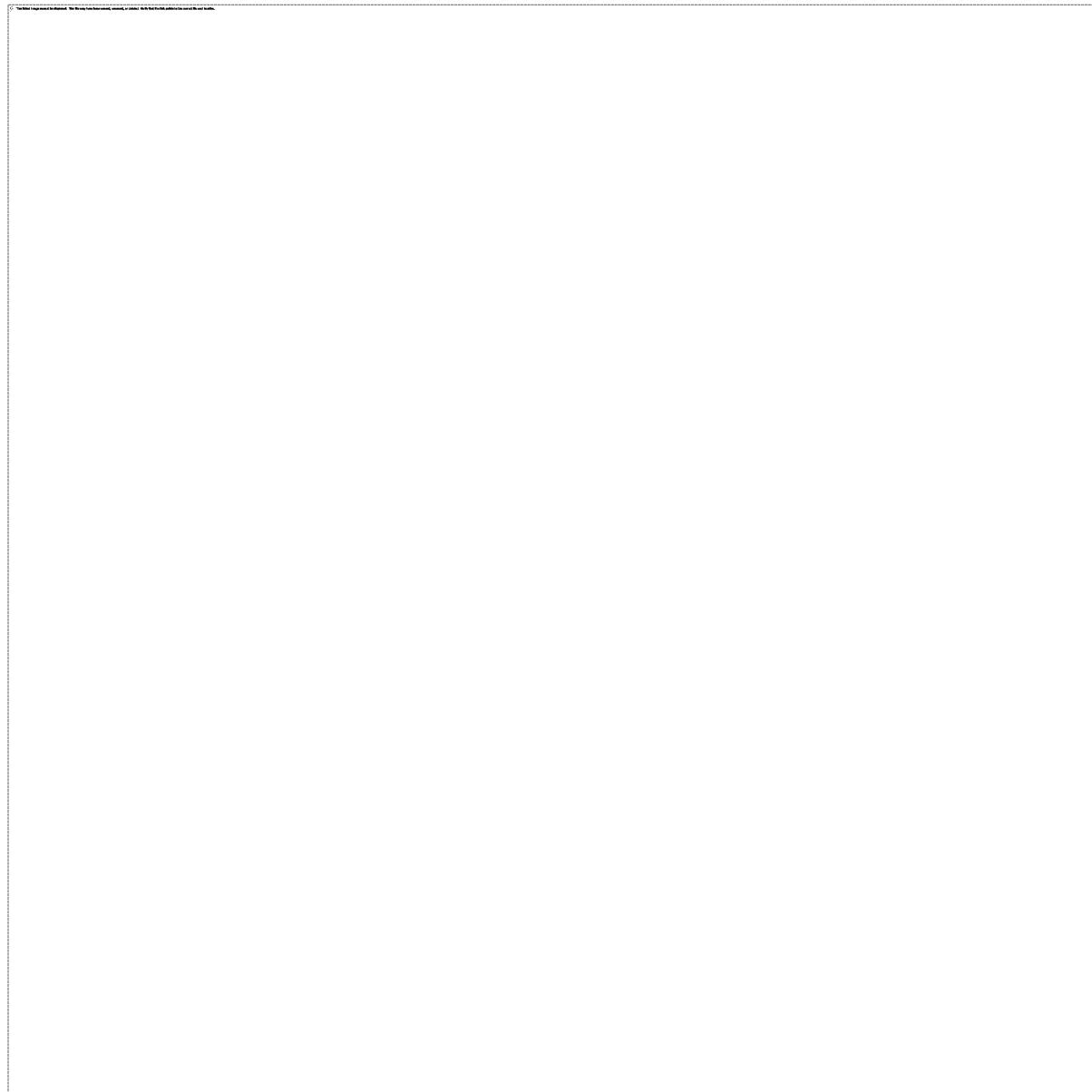
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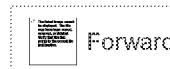
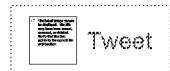


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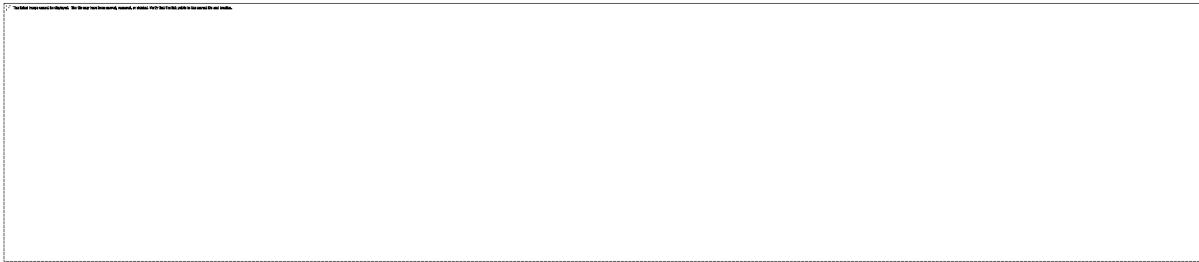


April 19, 2021

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ONLINE EVENT

National Academy of Sciences 158th Annual Meeting

Saturday-Sunday, April 24-25

The NAS annual meeting takes place each year in April in Washington, DC. Highlights from each meeting include the induction of members elected the previous year, the presentation of awards recognizing outstanding contributions to science, a scientific program that features discussions on a wide-range of topics, and the election of members, both U.S. and international.

[**View the Public Program**](#)

NOBEL PRIZE SUMMIT
Our Planet, Our Future
April 26-28, 2021

Inspired by Alfred Nobel's belief in celebrating achievements that contribute "the greatest benefit to humankind," the Nobel Foundation, the U.S. National Academy of Sciences, and the Potsdam Institute for Climate Impact Research/Stockholm Resilience Centre invite you to engage in an optimistic exploration of the best version of our collective future. The first Nobel Prize Summit will convene talks from Nobel laureates and conversations among experts from the science, policy, arts, and youth activist communities. It will bring together the world's brightest and most creative thinkers to focus on three key areas critical to the future of humanity:

Climate Change and Biodiversity Loss
Reducing Inequality
Technologies with the Power to Transform the Way We Live and Work

Informed by lessons learned during the course of the COVID-19 pandemic, it is clear that solving these challenges must be guided by an inclusive vision for our shared future – one that is grounded in science and that safeguards our global commons.

This free, online summit is a global platform for the exchange of ideas and the source of change-making approaches that will engage and entertain, motivate and embolden. Special performances by world-class artists combined with opportunities for dialogue and networking sessions round out the summit experience.

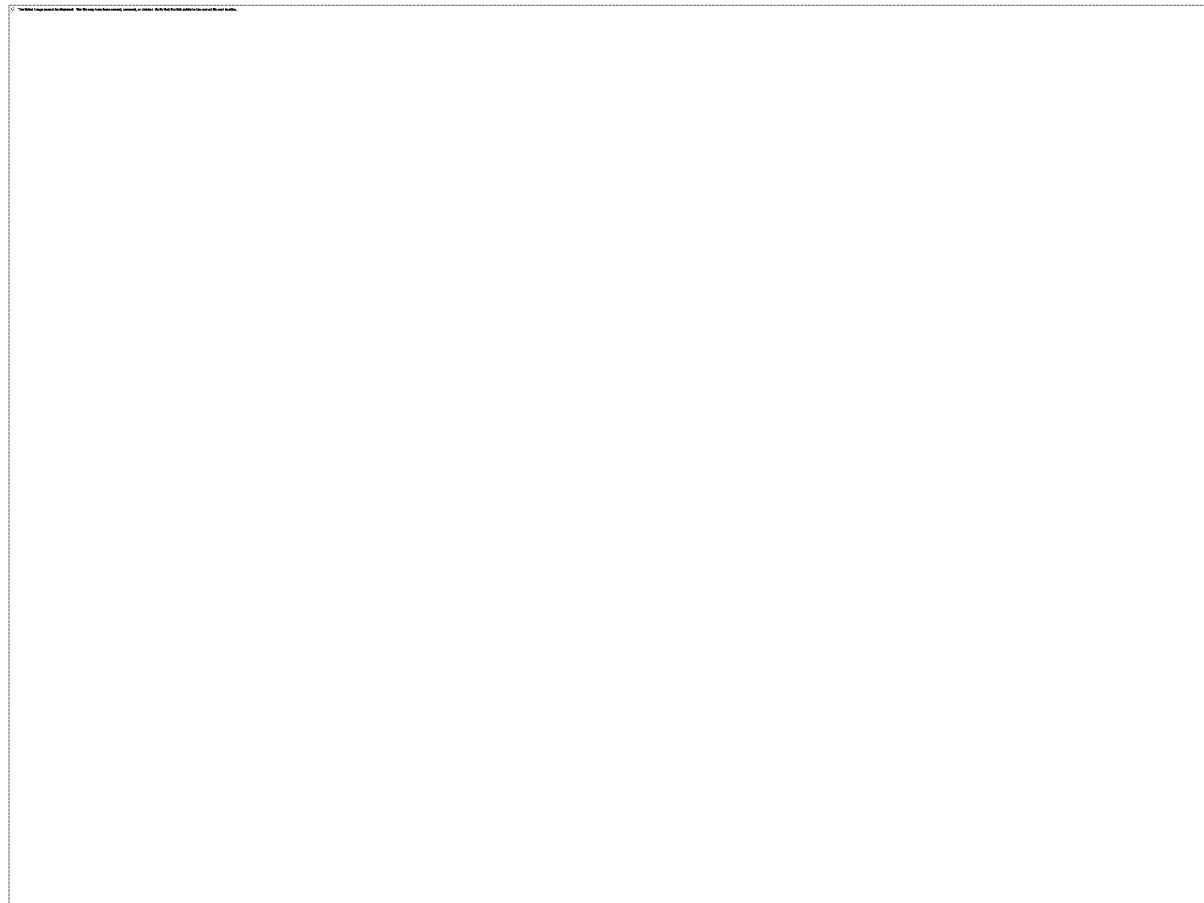
Our virtual auditorium is large but space is limited. Please RSVP for this unique mix of science, discussion, music, theatre, and action.

Reserve Your Virtual Seat Today

Visit our website nobelprize.org/our-planet-our-future to view the full lineup and current agenda, learn more about the Nobel Prize Summit, and to register for the virtual event.

Spread the word on your social channels: #NobelPrizeSummit

@nobelprize @theNASciences @PIK_Climate



WEBINAR SERIES

Earth Resources for the Energy Transition

Monday, April 26 | 1:00-3:00 PM ET

May 17 | 2:00-4:30 PM ET

Tuesday, June 1 | 2:00-4:30 PM ET

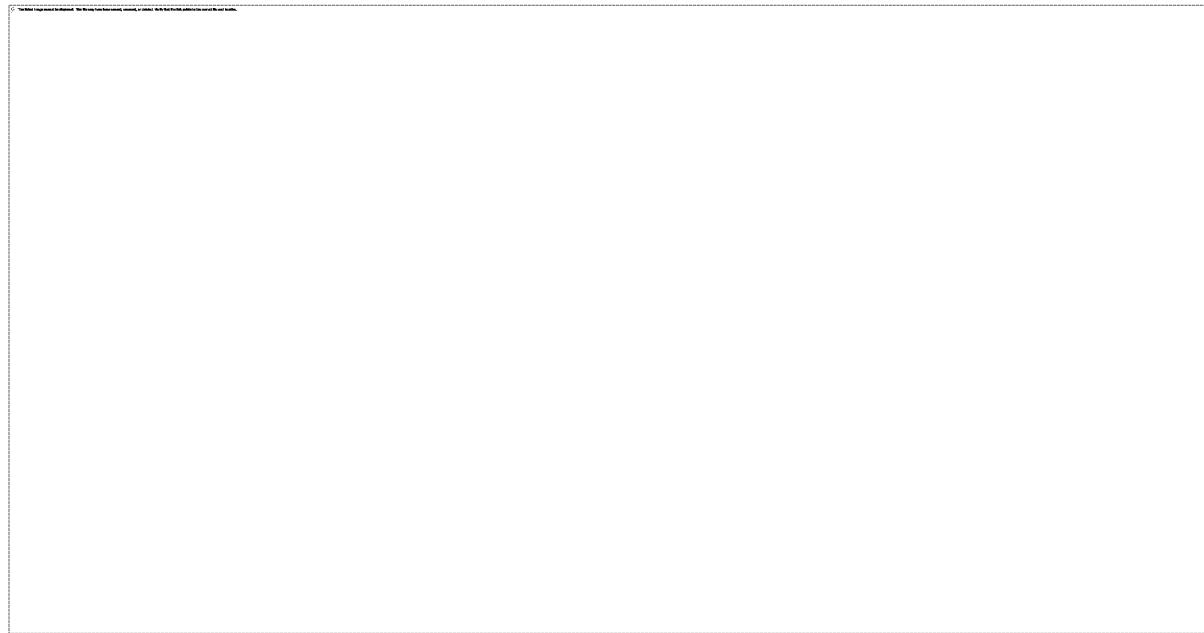
The primary energy systems that have supplied energy for transportation, industrial and agricultural production, community services, and municipal and individual uses have remained largely unchanged for decades in terms of the basic design of the electric grid and vehicular fleet but appear to be on the verge of a transformational change. The present energy transition will involve a shift in energy resources, generation, transmission, and use toward a low-carbon emissions energy system. The future is likely to be represented by a range of energy sources such as wind and solar energy, geothermal energy, nuclear energy, and hydropower, in addition to more

sustainable uses of natural gas, oil, and coal. This meeting will explore the fundamental Earth resource needs for minerals that will determine the pace and scale of the energy transition in the U.S. and globally.

Earth resources such as rare earth elements, cobalt, nickel, lithium, copper, platinum group elements, graphite, and other constituents are fundamental components in solar panels, batteries, electric vehicles, mass energy storage, and other key structural parts of the energy transition. Earth resources, beyond fossil fuels, are thus essential to develop the next generation of energy systems and infrastructure to a scale that can reliably supply the entire nation's energy needs while balancing technical, economic, environmental, and policy considerations.

The first webinar, to be held **April 26 from 1:00 till 3:00 PM ET**, will provide an overview of what "critical minerals" are; the practical needs for minerals in a variety of energy systems and related infrastructure (e.g., solar panels, batteries, mass energy storage, electric cars); and the global and U.S. national (critical) mineral supply chains.

[Register to Attend](#)



WEBINAR

Climate Conversations: Solar Geoengineering

Thursday, May 20 | 3:00-4:00 PM ET

Join us for a conversation on the possible risks and benefits of solar geoengineering as part of a portfolio of responses to climate change.

Solar geoengineering refers to a set of possible strategies to help reduce global warming by increasing the amount of solar radiation reflected away from Earth. Frank Sesno (George Washington University) will moderate a conversation with Marcia McNutt (National Academy of Sciences) and Chris Field (Stanford University) about how and whether solar geoengineering should fit into broader efforts to address climate change, the role of research in helping inform decisions about implementation, and the complex global ethics and governance issues associated with solar geoengineering. The webinar will include discussion of the new National Academies report, *Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance*, which was chaired by Dr. Field.

The conversation will be webcast on the Climate Conversations webpage on **Thursday, May 20, 2021 from 3-4 pm ET**. Closed captioning will be provided.

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

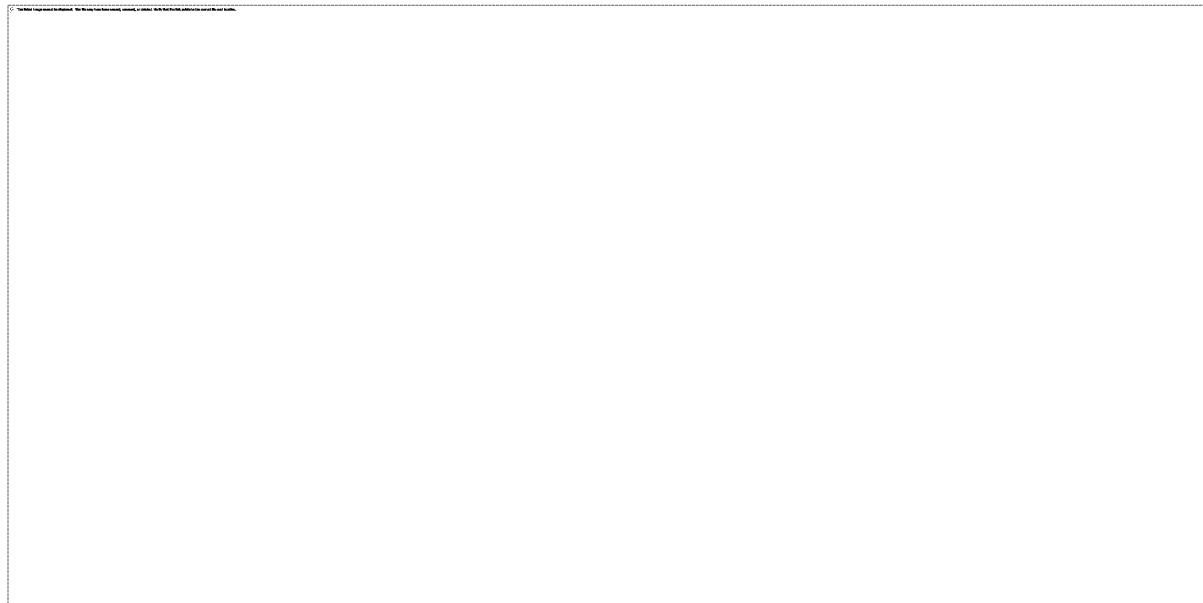
[Register to Attend](#)

In Case You Missed It:

Climate Conversations: The Cost of Carbon

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. In our April 15 Climate Conversation, Justin Worland (TIME) moderated a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation also touched on the social cost of other greenhouse gases.

[Watch the Conversation](#)



WORKSHOP

The Chemistry of Urban Wildfires: an Information-Gathering Session

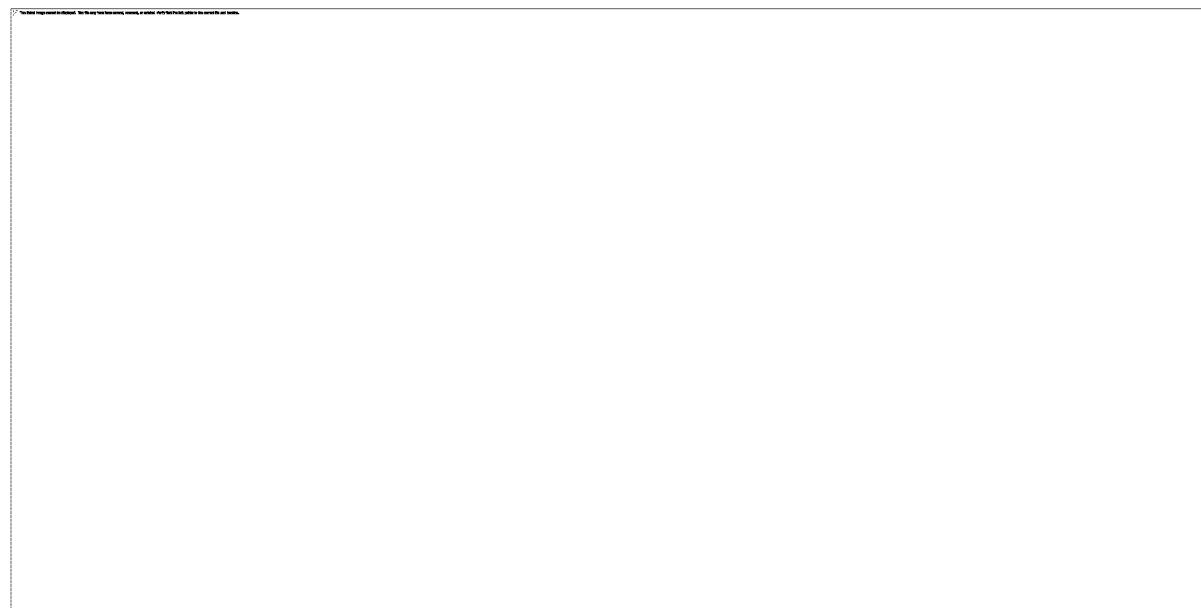
Tuesday, June 8 | 10:00 AM-5:00 PM EDT

How do fires at the wildland-urban interface (WUI) differ from wildland fires? And how does understanding these differences change how we mitigate fires and their impacts on families and communities?

The study [The Chemistry of Urban Wildfires](#) will examine these questions. Join us on Tuesday, June 8, 2021, for an all-day virtual information gathering workshop that will help inform the study committee as they develop recommendations for mitigating the impact of urban wildfires on the general public.

The specific goals of this workshop are to hear from leaders in the field in order to better understand (1) the composition of residential materials and their combustion products, (2) the sources of emissions and potential exposures, (3) the chemical processes involved, and (4) data gaps and research needs that remain.

[Register to Attend](#)



WORKSHOP

How We Move Matters: Exploring the Connections between New Transportation and Mobility Options and Environmental Health

Tuesday, July 13, Friday, July 16, and Wednesday, July 21 | 11:30 AM-5:30 PM ET

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment. How does ridehailing affect air pollution in our communities? What are the environmental impacts of having packages delivered to our front door?

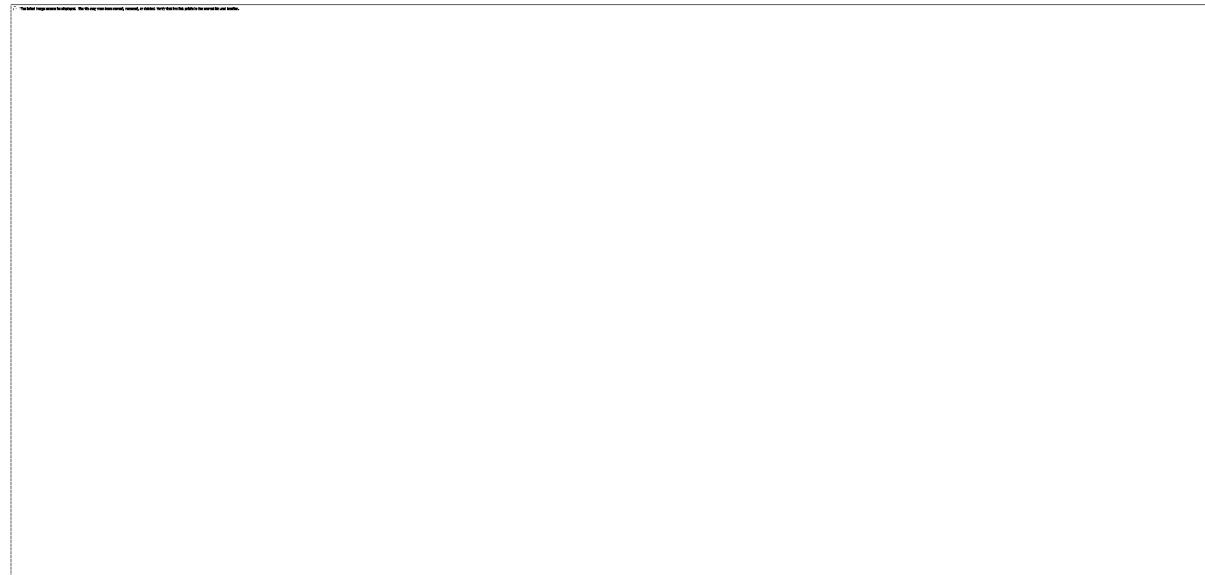
This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants

will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

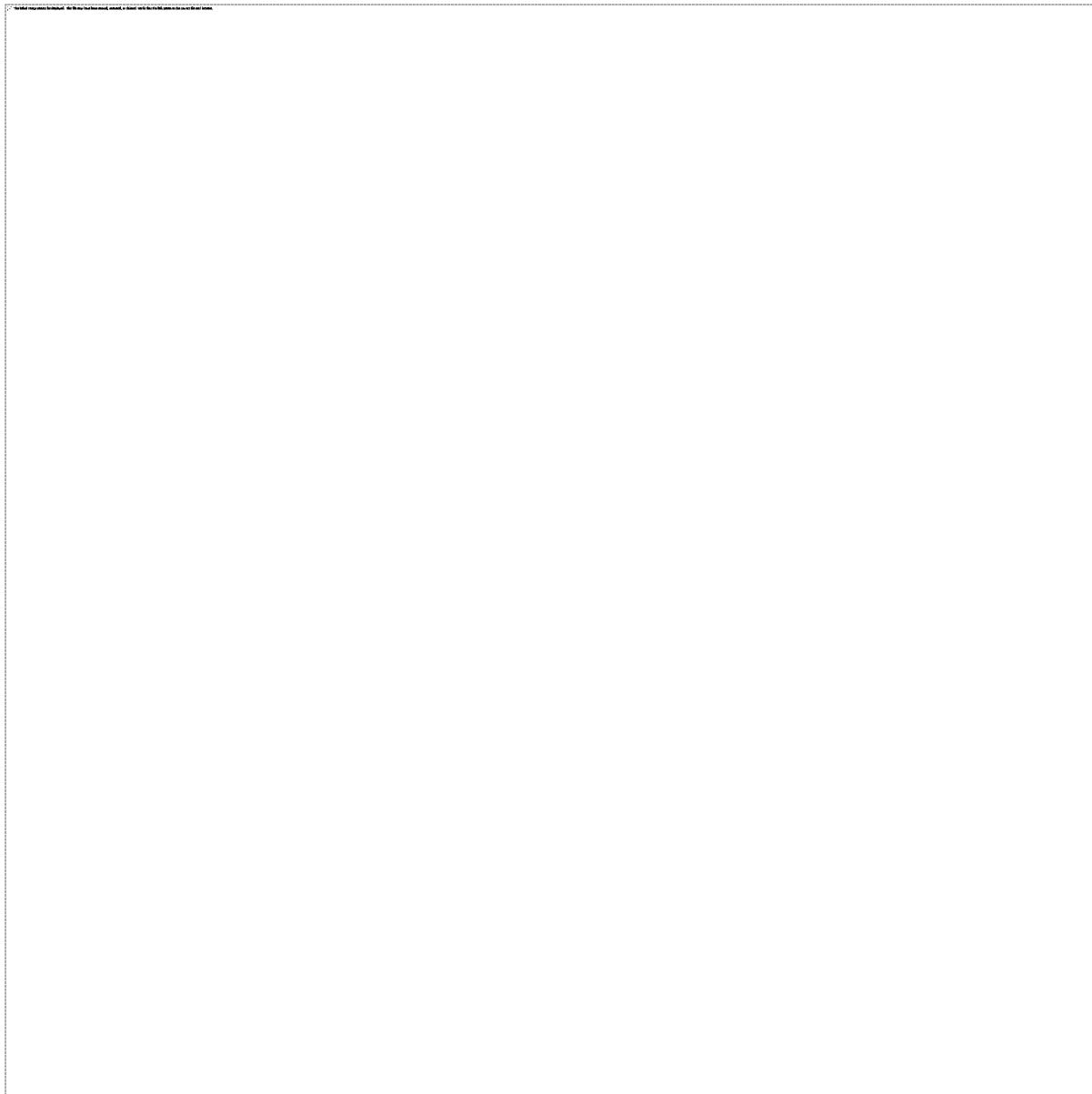
Workshop sessions will take place between 11:30 AM – 5:30 PM (ET) on July 13, 16, and 21, 2021. This workshop is public and free to attend.

More information, including the full agenda and speaker lineup, will be posted on [the event webpage](#) soon.

[Register to Attend](#)

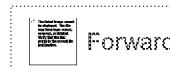
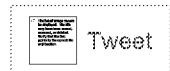


Explore Our Climate Resources



As evidence of a changing climate continues to make headlines, the National Academies has made it easier than ever to explore our wide-ranging resources on climate-related issues. Building on decades of work, we gather top experts to help the nation better understand, prepare for, and limit future climate change. Visit [Climate at the National Academies](#) for more about our upcoming events, current work, and existing resources.

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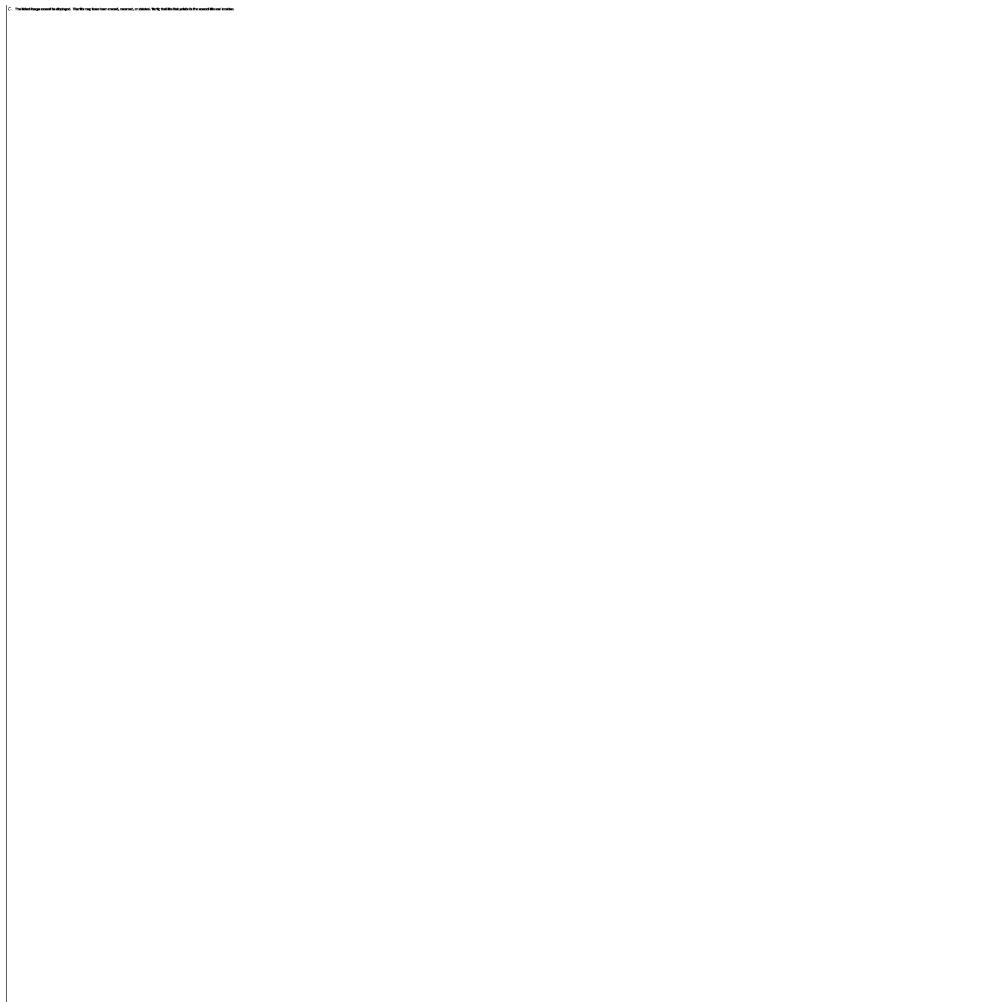
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Upcoming Webinar

Climate Conversations: Decarbonization

February 18, 2021 | 3:00-4:00 PM EST

Join us for a conversation about what it means to decarbonize, and about quick and equitable actions to put the United States on a path to net-zero emissions by 2050.

[Register Now](#)

Climate Conversations: Pathways to Action is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

For the inaugural webinar, Mariette DiChristina (Boston University) will be facilitating a conversation with Ben Preston (RAND) and Steve Pacala (Princeton University) about the most actionable opportunities for decarbonization in the United States. The webinar will include discussion of the National Academies new report, [Accelerating Decarbonization of the United States Energy System](#), which was chaired by Dr. Pacala.

Participants:

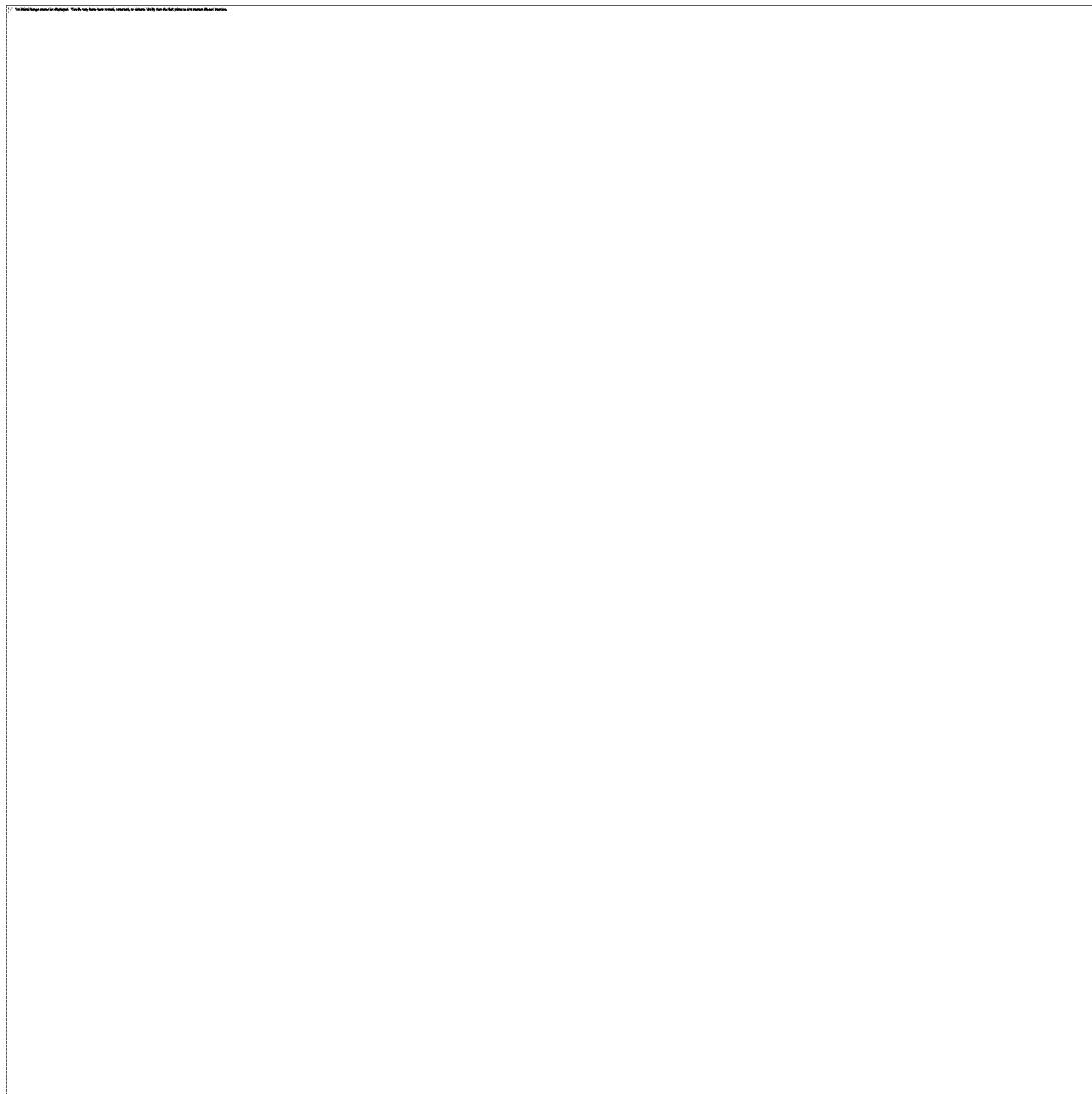
Stephen W. Pacala is the Frederick D. Petrie Professor of Ecology and Evolutionary Biology at Princeton University, where he directs the Carbon Mitigation Initiative. He is the Chair of the National Academies Committee on Accelerating Decarbonization in the United States: Technological, Policy, and Societal Dimensions.

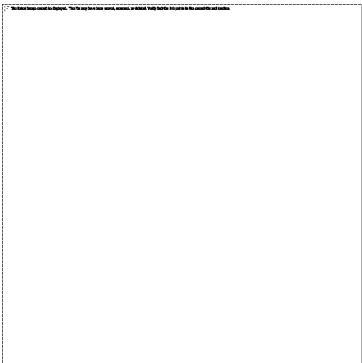
Benjamin Preston is a senior policy researcher at the RAND Corporation and director of Community Health and Environmental Policy, a program of RAND Social and Economic Well-Being, and currently serves as coeditor-in-chief for the

Elsevier journal Climate Risk Management.

Mariette DiChristina is the dean of the College of Communication at Boston University and a nationally recognized science journalist, most recently as editor-in-chief and executive vice president of Scientific American.

The event will be webcast on the [Climate Conversations webpage](#). Closed captioning will be provided. Details about additional webinars will be posted soon.





E

Negative Emissions Technologies and Reliable Sequestration: A Research Agenda

To achieve goals for climate and economic growth, “negative emissions technologies” (NETs) that remove and sequester carbon dioxide from the air will need to play a significant role in mitigating climate change. Unlike carbon capture and ...

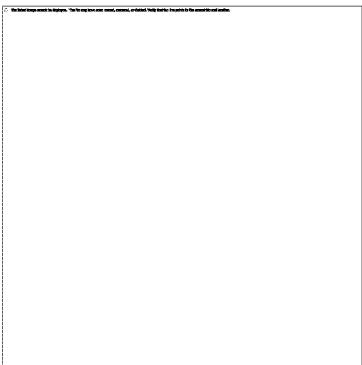
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Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide

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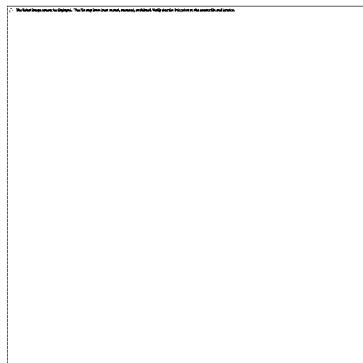
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America's Energy Future: Technology and Transformation

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Energy touches our lives in countless ways and its costs are felt when we fill up at the gas pump, pay our home heating ...

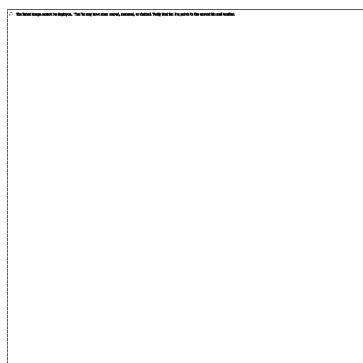
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Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia

Emissions of carbon dioxide from the burning of fossil fuels have ushered in a new epoch where human activities will largely determine the evolution of Earth's climate. Because carbon dioxide in the atmosphere is long lived, it can effectively ...

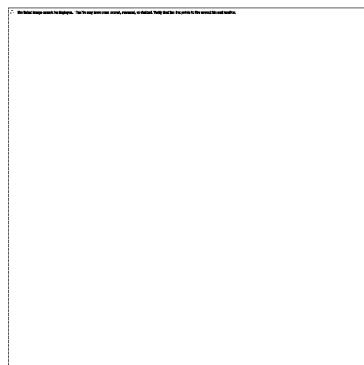
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Environmental Engineering for the 21st Century: Addressing Grand Challenges

Environmental engineers support the well-being of people and the planet in areas where the two intersect. Over the decades the field has improved countless lives through innovative systems for delivering water, treating waste, and preventing and ...

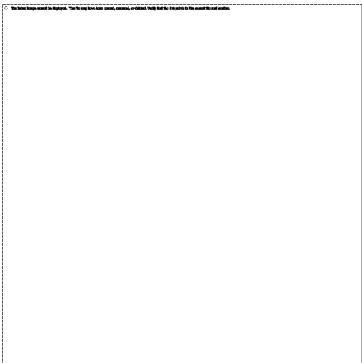
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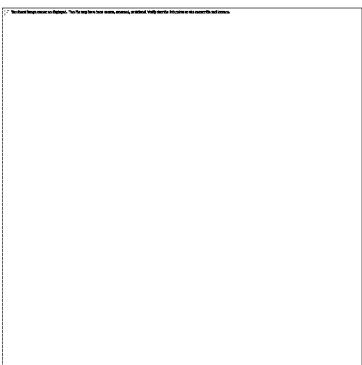


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The Power of Change: Innovation for Development and Deployment of Increasingly Clean Electric Power Technologies

Electricity, supplied reliably and affordably, is foundational to the U.S. economy and is utterly indispensable to modern society. However, emissions resulting from many forms of electricity generation create environmental risks that could have ...

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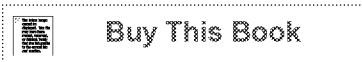


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Climate Change: Evidence and Causes: Update 2020

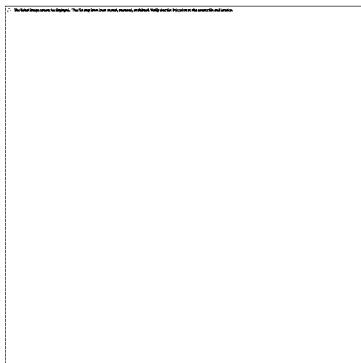
Climate change is one of the defining issues of our time. It is now more certain than ever, based on many lines of evidence, that humans are changing Earth's climate. The Royal Society and the US National Academy of Sciences, with their similar ...

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Climate change is occurring. It is very likely caused by the emission of greenhouse gases from human activities, and poses significant risks for a range of human and natural systems. And these emissions continue to increase, which will result in ...

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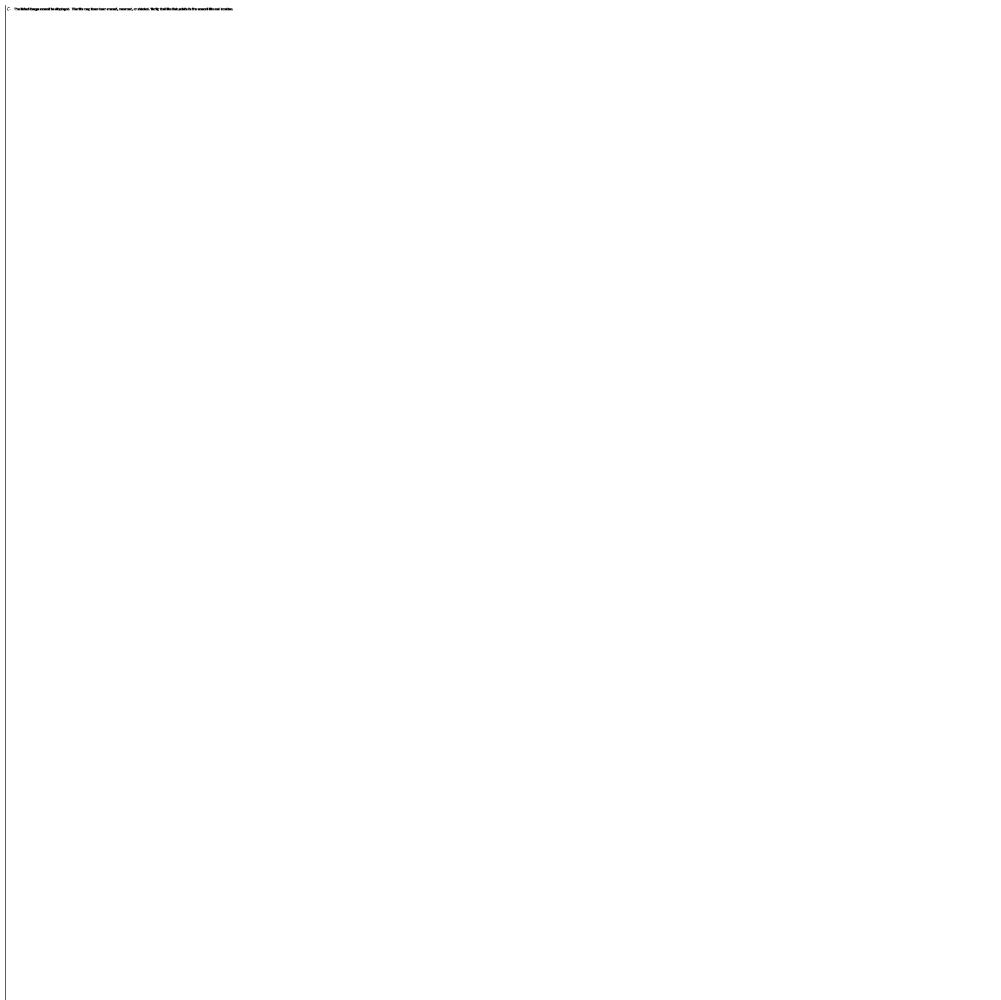
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Upcoming Climate Conversations Webinar

Climate & COVID-19

March 18, 2021 | 3:00-4:00 PM EDT

[Register Now](#)

Join us for a conversation about the climate crisis and COVID-19 pandemic, and steps to a more resilient and equitable future.

Almost exactly one year after U.S. COVID-19 lockdowns began, Laura Helmuth (Scientific American) will moderate a [conversation](#) between Georges Benjamin (APHA) and Kristie Ebi (University of Washington) that is both reflective about the intersections between climate change and COVID-19 over the last year, and forward-looking at the state of progress on addressing these issues in the U.S.

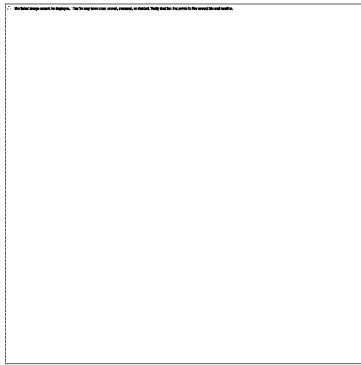
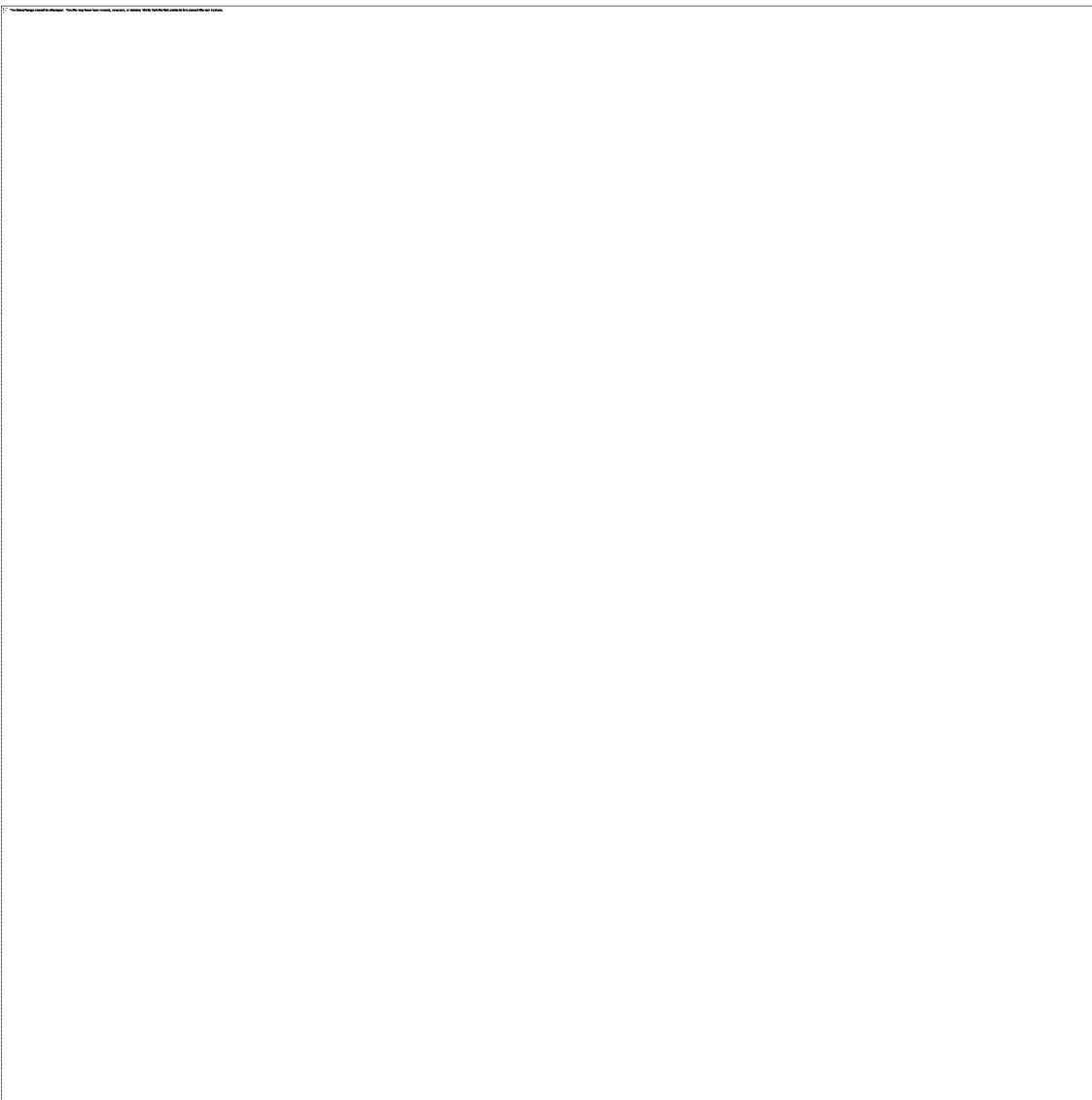
[Climate Conversations: Pathways to Action](#) is a new monthly webinar series from the National Academies of Sciences, Engineering, and Medicine that aims to convene high-level, cross-cutting, nonpartisan conversations about issues relevant to national policy action on climate change.

Participant Bios

Georges Benjamin has served as the executive director of the American Public Health Association, the nation's oldest and largest organization of public health professionals, since December 2002. Well known as a health leader, practitioner, and administrator, he is a former secretary of health for the State of Maryland.

Kristie L. Ebi is a Professor in the Department of Global Health and in the Department of Environmental and Occupational Health Sciences at the University of Washington. She conducts research on the impacts of and adaptation to climate change, including on extreme events, thermal stress, foodborne safety and security, waterborne diseases, and vectorborne diseases.

Laura Helmuth is the Editor-in-Chief of Scientific American. Previously, she was The Washington Post's Science and Health Editor and president of the National Association of Science Writers.



Climate Change: Evidence and Causes: Update 2020

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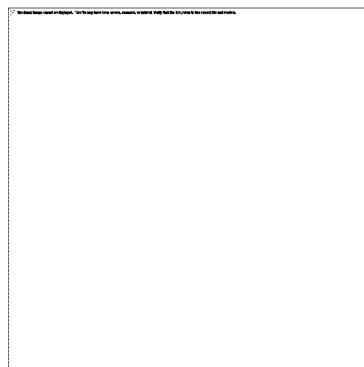
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Accelerating Decarbonization of the U.S. Energy System

The world is transforming its energy system from one dominated by fossil fuel combustion to one with net-zero emissions of carbon dioxide (CO₂), the primary anthropogenic greenhouse gas. This energy transition is critical to mitigating climate ...

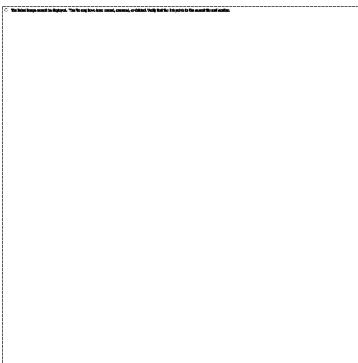
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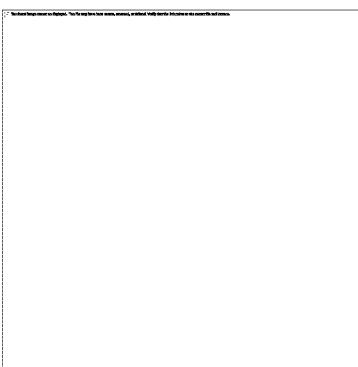


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Rapid Expert Consultations on the COVID-19 Pandemic: March 14, 2020-April 8, 2020

In response to a request from the Office of Science and Technology Policy and the Office of the Assistant Secretary for Preparedness and Response, the National Academies of Sciences, Engineering, and Medicine convened a standing committee of ...

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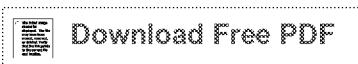


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Discussion Draft of the Preliminary Framework for Equitable Allocation of COVID-19 Vaccine

On September 1, 2020, the National Academies of Sciences, Engineering, and Medicine invited public comment on the Discussion Draft of the Preliminary Framework for Equitable Allocation of COVID-19 Vaccine, commissioned by the Centers for Disease ...

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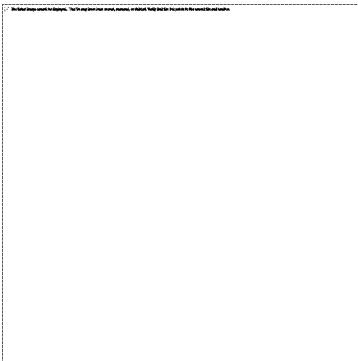
Airborne Transmission of SARS-CoV-2: Proceedings of a Workshop—in Brief

With the rapidly evolving coronavirus disease 2019 (COVID-19) pandemic, researchers are racing to find answers to critical questions about the virus that causes the disease severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). ...

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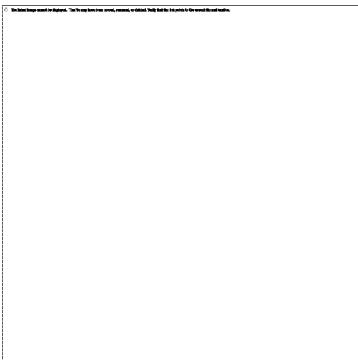
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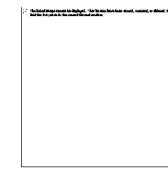
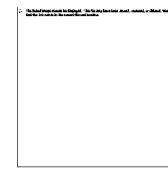
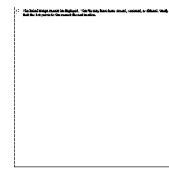


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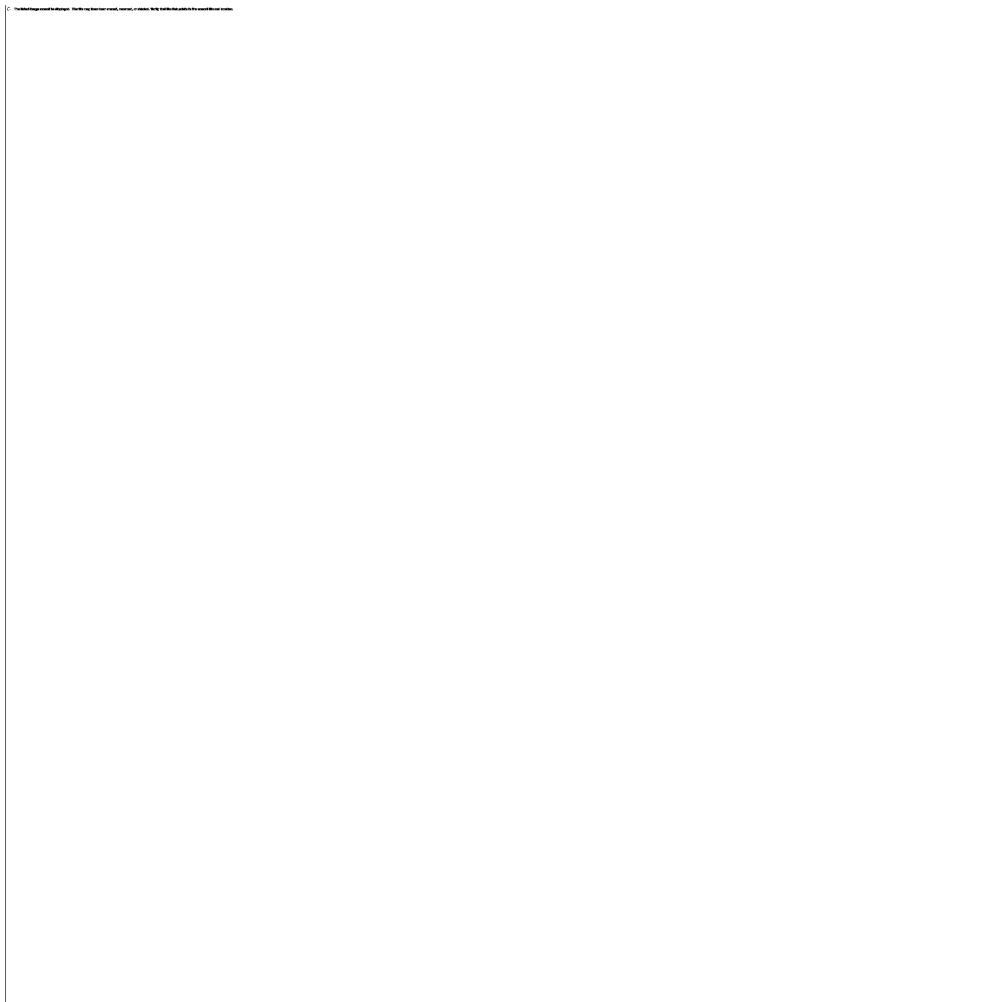
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Climate Conversations: The Cost of Carbon

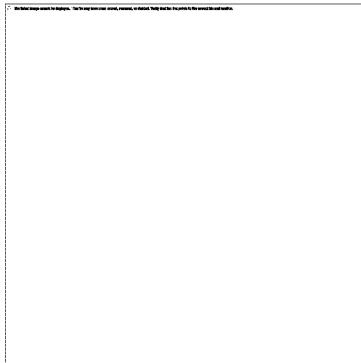
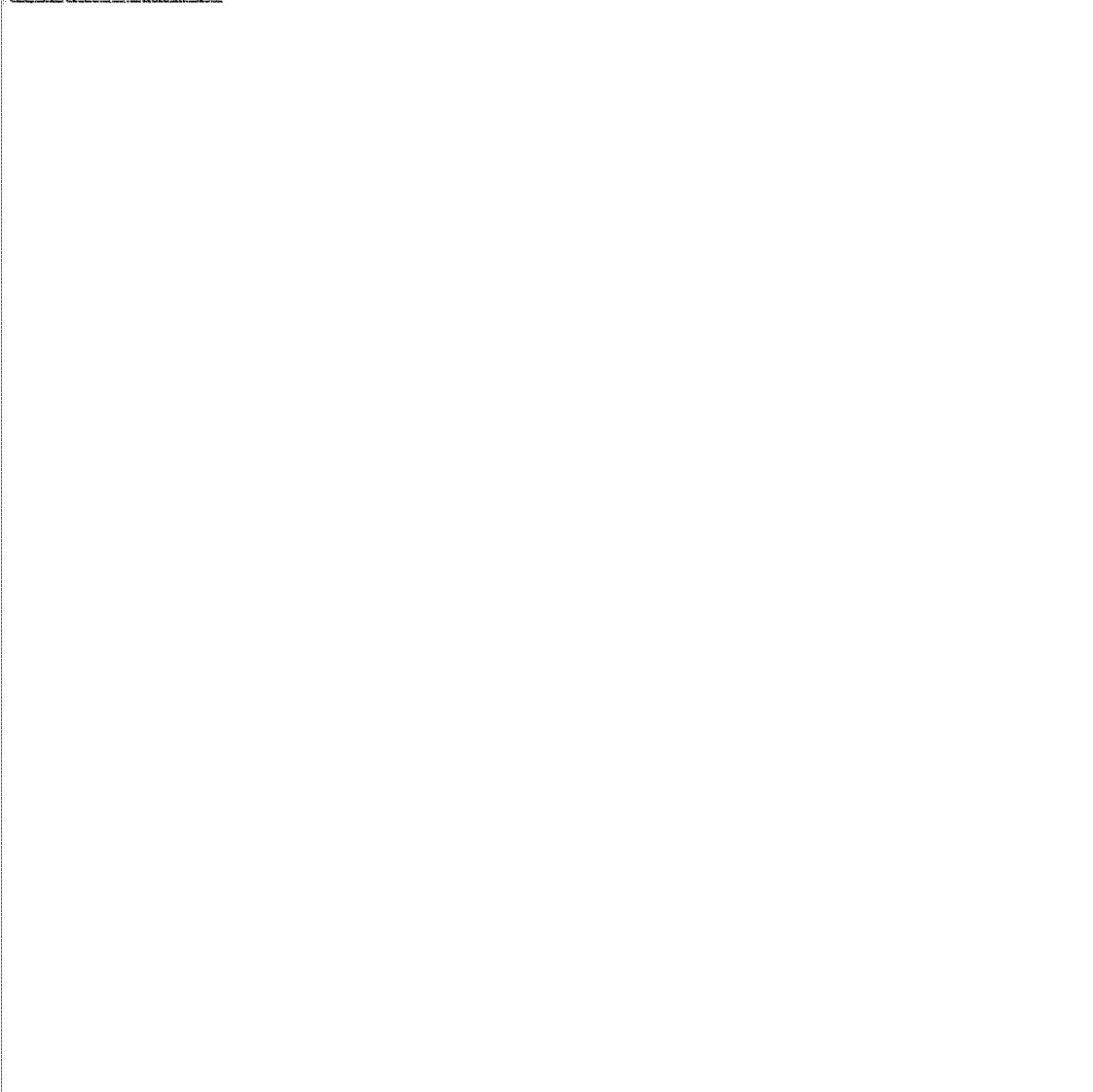
TOMORROW, April 15, 2021 | 3:00-4:00 PM ET

*Join us for a virtual conversation about the social cost of carbon
and equitable climate policy in the United States.*

[Register Now](#)

The social cost of carbon is a metric used for incorporating the economic impacts of carbon emissions into federal decision-making. Justin Worland (TIME) will moderate a conversation with Richard Newell (Resources for the Future) and Rachel Cleetus (Union of Concerned Scientists) about the social cost of carbon, its importance for addressing the climate change challenge, and considerations for how it can advance equitable and economically sound policies. The conversation will also touch on the social cost of other greenhouse gases.

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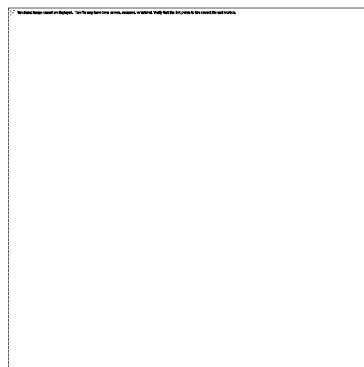
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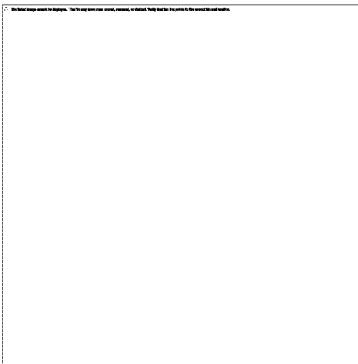
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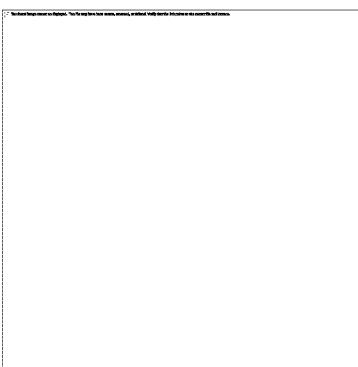


[P]

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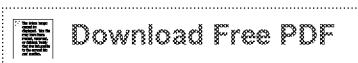


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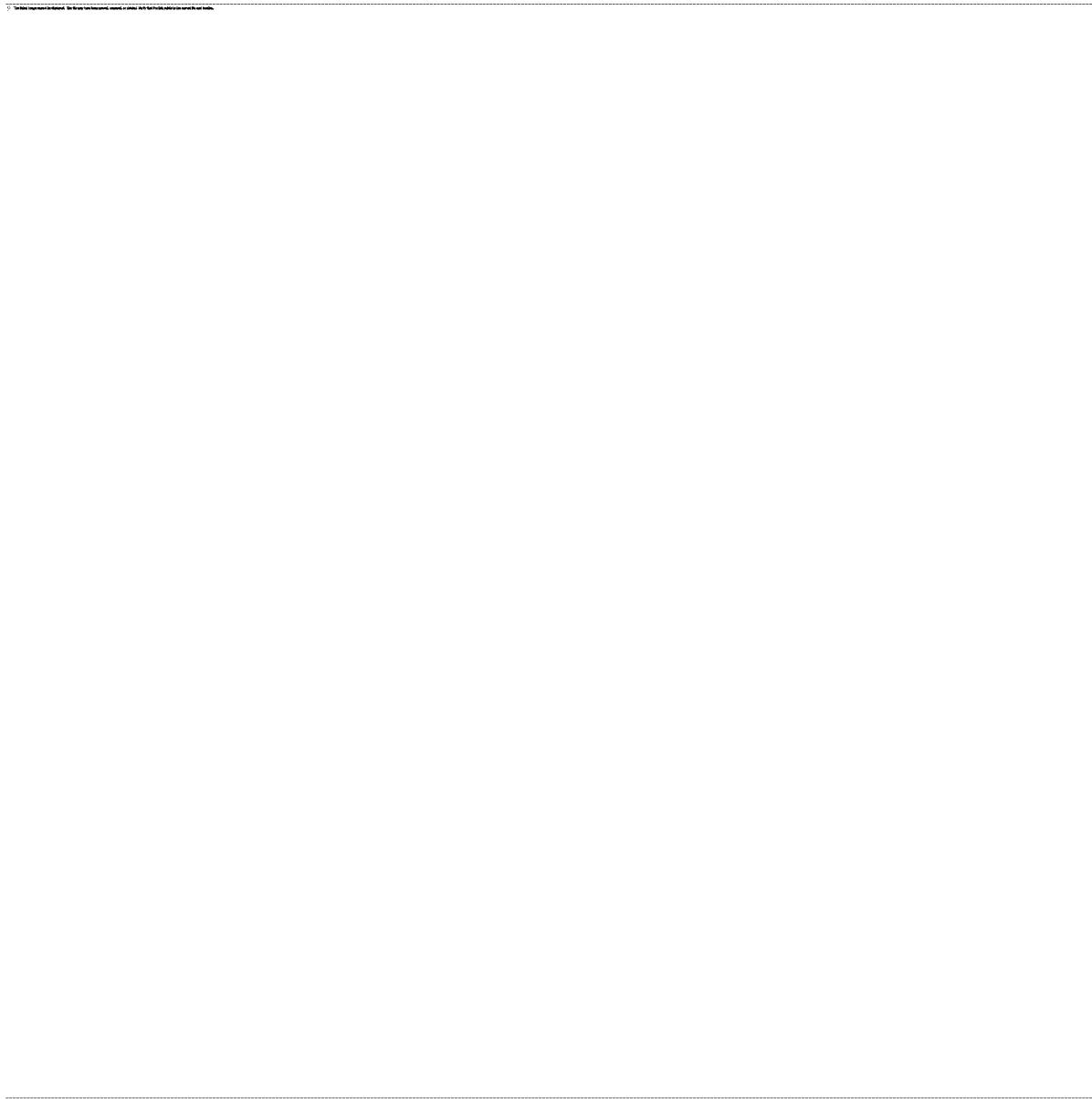
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Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 3/18/2021 2:55:18 PM
To: Geoff Blanford [gblanford@epri.com]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Kanudia, Amit [amit@kanors.com]; Marc Melaina [marc.melaina@ee.doe.gov]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Whitney Herndon [wjherndon@rhg.com]; Wright, Evelyn [Evelyn.Wright@epri.com]; Charles Rossmann [cgrossma@southernco.com]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Shin, Dave [shind@api.org]; Steve Suryan [steve.suryan@chevron.com]; abarron@smith.edu; Ben Leibowicz [bleibowicz@utexas.edu]; Johnn Bistline [jbistline@epri.com]; Elke Hodson [Elke.Hodson@epri.com]; Shelby, Michael [Shelby.Michael@epa.gov]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Turnure, James [James.Turnure@eia.gov]; Arent, Doug [Doug.Arent@nrel.gov]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Carla Frisch [cfrisch@rmi.org]; Grundler, Christopher [grundler.christopher@epa.gov]; Jose Benitez [jose.benitez@hq.doe.gov]; Tom Wilson [twilson@epri.com]

Subject: REMINDER: EMF 37 Working Group Meeting #6

Start: 4/9/2021 4:00:00 PM
End: 4/9/2021 7:00:00 PM
Show Time As: Tentative

Recurrence: (none)

Appointment

From: McFarland, James [McFarland.James@epa.gov]
on behalf of John P Weyant [weyant@stanford.edu]

Sent: 4/15/2021 1:22:18 PM

To: Fawcett, Allen [Fawcett.Allen@epa.gov]

Subject: FW: EMF 37 Steering Committee Meeting

Start: 4/15/2021 4:00:00 PM

End: 4/15/2021 5:00:00 PM

Show Time As: Tentative

-----Original Appointment-----

From: John P Weyant <weyant@stanford.edu>

Sent: Monday, April 12, 2021 6:30 PM

To: John P Weyant; Geoff Blanford; Trieu Mai; McFarland, James

Subject: EMF 37 Steering Committee Meeting

When: Thursday, April 15, 2021 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada).

Where:

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting

Time: Apr 15, 2021 09:00 AM Pacific Time (US and Canada)

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SIP: [Ex. 6]

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Tentative Agenda

(1) Review/update on overall goals for the study (10 minutes)

(1) Goals for process of going from Beta Round to Round #1 (10 minutes)

(2) Timing (Start/Spacing) and Number of Sessions(30 minutes)

- 1-2 sessions?
- 3 Sessions could be - Beta Round Review, Reactions to Beta Round, Round #1 Design
- Other

(3) Who else do we need to engage before we are finished and how to keep current groups engaged. (10 minutes)

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/5/2021 3:07:03 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Geoff Blanford [gblanford@epri.com]

Subject: EMF 37 Steering Committee Meeting

Start: 5/5/2021 8:00:00 PM
End: 5/5/2021 9:00:00 PM

Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting

Time: May 5, 2021 01:00 PM Pacific Time (US and Canada)

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International numbers available: [Ex. 6]

Meeting ID: [Ex. 6]

Password: [Ex. 6]

SIP: [Ex. 6]

Password: [Ex. 6]

Agenda for 5-5-2021 SC Call

(1) Agenda for May 14th Meeting

- Study Groups-Ideas for Round #1 (15 minutes each)
- Discussion
- Short Break
- System Modelers-Ideas for Round #1 (5 minutes each)
- Short Break
- Discussion of Way Forward, inc. June 11th Beta Round Results Meeting
- Progress on Round #1 Submissions

ED_014112B_00000055-00002

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/14/2021 2:12:08 AM
To: Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, Jae [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giorola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6]; Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6]; Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfu.ca]; Kelly Perl [eia-oeceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshawalter@onlocationinc.com]; Saulabh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxen@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6]; Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mary.zimmerman@dot.gov];
CC: Mark Jaccard [mark_jaccard@sfu.ca]; Chris Bataille [Ex. 6]; Sandoval, Noah [Noah.Sandoval@nrel.gov]; Perl, Kelly [Kelly.Perl@eia.gov]; Fuhrman, Jay G [jay.fuhrman@pnnl.gov]; Evans, David A [Evans.DavidA@epa.gov]; Ruying Gao [rgao1@stanford.edu]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]
Subject: EMF 37 Working Group Meeting #7
Start: 5/14/2021 4:00:00 PM
End: 5/14/2021 7:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #7

Time: May 14, 2021 09:00 AM Pacific Time (US and Canada)

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International numbers available

Ex. 6

Meeting ID **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 6/3/2021 1:50:29 PM
To: Geoff Blanford [gblanford@epri.com]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]

Subject: EMF 37 Steering Committee Meeting

Start: 6/4/2021 4:00:00 PM
End: 6/4/2021 5:00:00 PM

Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting

Time: Jun 4, 2021 09:00 AM Pacific Time (US and Canada)

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Meeting ID: [redacted] **Ex. 6**

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Tentative Agenda

- (1) Update on Beta round submissions (Jim)- 5 minutes
- (2) Reflections on Meetings with Study Groups (All)-10 minutes
- (3) Structure of June 11th WG Meeting (Allen and All) - 20 minutes
- (4) Tasks to complete before June 11th (John and All) - 10 minutes
- (5) Tentative schedule through end of 2021 and beyond (All) - 10 minutes

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 6/6/2021 7:40:30 PM
To: Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, Jae [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giarola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshawalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6] Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxon [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mary.zimmerman@dot.gov]; Evans, DavidA [Evans.DavidA@epa.gov]; Ruying Gao [rgao1@stanford.edu]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Kyle, G Page [pkyle@pnnl.gov]; Mark Jaccard [mark_jaccard@sfsu.ca]; Macri, Daniel [macri.daniel@epa.gov]

Subject: EMF 37 Working Group Meeting #8-Beta Round Results Review

Start: 6/11/2021 4:00:00 PM
End: 6/11/2021 7:30:00 PM
Show Time As: Tentative

Recurrence: (none)

Topic: EMF 37 Working Group Meeting #8

Time: Jun 11, 2021 09:00 AM Pacific Time (US and Canada)

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Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 6/16/2021 2:30:56 AM
To: Geoff Blanford [gblanford@epri.com]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: EMF 37 Steering Committee Meeting
Start: 6/16/2021 6:00:00 PM
End: 6/16/2021 7:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Jun 16, 2021 11:00 AM Pacific Time (US and Canada)

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Tentative Agenda

- (1) Reflections on last week's working group meeting
- (2) Organizing for developing Round #1 Scenarios (matrix plus design document)
 - Degree of reliance on direct requests to study groups vs SC+others
 - Form and timing of interactions with study groups
 - Review process before pulling giving the go ahead to run
- (3) Process for the fall and after
 - Request for results desired for final reports and to stimulate new cross-cut paper proposals
 - Publication options
 - Possible intermediate formal and informal products

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 7/29/2021 12:40:04 AM
To: Muratori, Matteo [Matteo.Muratori@nrel.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Geoff Blanford [gblanford@epri.com]
Subject: Canceled: Matteo Muratori Meeting With EMF 37 Steering Committee
Start: 7/29/2021 3:00:00 PM
End: 7/29/2021 4:00:00 PM
Show Time As: Free
Importance: High
Recurrence: (none)

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/23/2021 5:54:58 PM
To: Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [caspurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB Ex. 6 caspurlock [caspurlock@lbl.gov]; Hernandez, Rachel C. EOP/OMB Ex. 6 Fenichel, Eli P. EOP/OSTP Ex. 6 michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]
CC: Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB Ex. 6 Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]
Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: Ex. 6
Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Tentative

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang
Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US:
mobile:
Meeting
URL:
Meeting ID:
Passcode:

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US:
Meeting
ID:
Passcode:

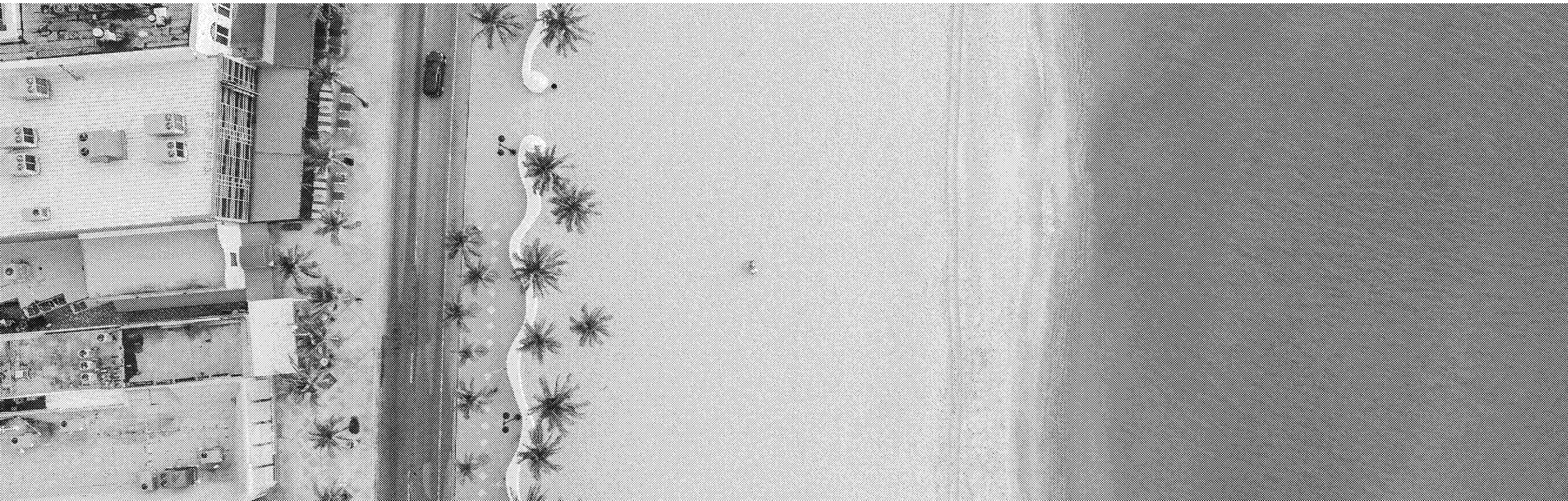
International numbers

Join from an H.323/SIP room system

H.323: (US West)
 (US East)
Meeting
ID:
Passcode:
SIP:
Passcode:

Updating SC-GHGs with the best available science

An overview of the Climate Impact Lab's SC-GHG research and tools



The current IAMs have fallen far behind the frontier of understanding

The [SCC] is under fire. Industry groups, politicians — including leaders of the energy and commerce committee of the US House of Representatives — and some academics say that uncertainties render the estimate useless.....

- Revesz et al (Nature, 2014)

[I]ntegrated assessment models (IAMs) have flaws that make them close to useless as tools for policy analysis. IAM-based analyses of climate policy create a perception of knowledge and precision that is illusory and can fool policymakers into thinking that the forecasts the models generate have some kind of scientific legitimacy.

- Pindyck (Rev of Env Econ & Policy, 2020)

Damage projections [in IAMs] fail to reflect the current understanding of climate impacts from the [impacts research] community Damage functions are often calibrated directly or indirectly to older literature, much dating back to the 1990s.

- Moore & Diaz (Nature Climate Change, 2017)

The current IAMs have fallen far behind the frontier of understanding

Widely used values for the SCC have been criticized, with particular skepticism surrounding the empirical basis used by IAMs to project climate damages and, thus, the SCC....

SCC-focused IAMs...need a more structured way of incorporating new information.

- Burke et al (Science, 2016)

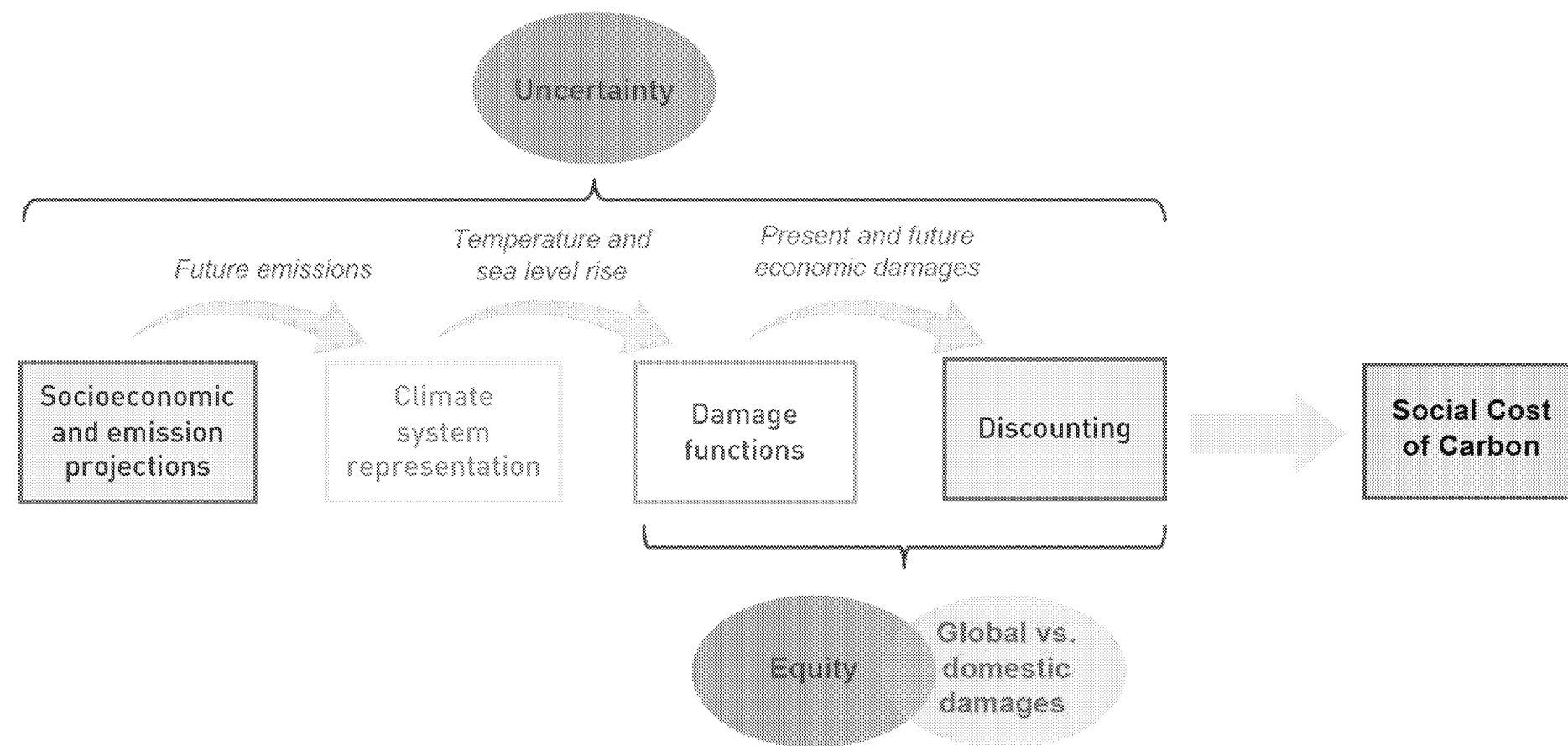
The models should be revised more frequently to accommodate scientific developments... the structure and in some cases the calibration of the damage models is stuck in the 1990s, when the original versions were created...

- Revesz et al (Nature, 2014)

[The] simplified representation of climate change impacts in cost-benefit IAMs suffers from several limitations ... these gaps are further underscored by a disconnect between recent advances in our understanding of climate change impacts and their incorporation in IAM damage functions.

- Moore & Diaz (Nature Climate Change, 2017)

The Interim TSD correctly identify four key areas where the IAMs need to be overhauled, building off the National Academies (NASEM) report



The Climate Impact Lab has addressed all four, drawing on the best available science and economics and NASEM recommendations

1. Socioeconomic and emission projections

IAMs: EMF-22 projections developed in 2007

CIL: SSSPs and RCPs widely used by the IPCC and global scientific community, or expert elicitation socioeconomic projections from RFF when available.

3. Damage functions

IAMs: Methodologically inconsistent and geographically limited damage functions with no empirical basis and often no supporting publications or other documentation.

CIL: Empirically-based damage functions based on globally-representative data, that employ modern scientific methods and include both the cost and benefits of adaptation.

2. Climate system representation

IAMs: Reduced form models based on economists' interpretation of climate science. Sluggish response to carbon dioxide emissions, no local climate information.

CIL: FaIR simple climate model with prompt response to emissions consistent with state-of-the-art models. Localized climate data from a comprehensive ensemble of GCMs.

4. Discounting

IAMs: Fixed discount rates based on outdated capital market information. Uncertainty and equity are ignored entirely.

CIL: Either prescriptive or descriptive discount rates and the ability to capture both uncertainty and equity.

The Climate Impact Lab has addressed all four key areas, drawing on the best available science and economics and NASEM recommendations

1. Socioeconomic and emission projections

- IAMs: EMF-22 projections developed in 2007
- CIL: SSPs and RCPs widely used by the IPCC and global scientific community, or expert elicitation socioeconomic projections from RFF when available.

SOCIOECONOMIC AND EMISSIONS SCENARIOS

Moving to IPCC-consistent socioeconomic and emissions projections

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

Shortcomings in the Interim SC-GHGs

- Population, economic activity and GHG emission projections were developed around 2007 through the EMF-22 process
- Does not reflect last decade of work in scenario development

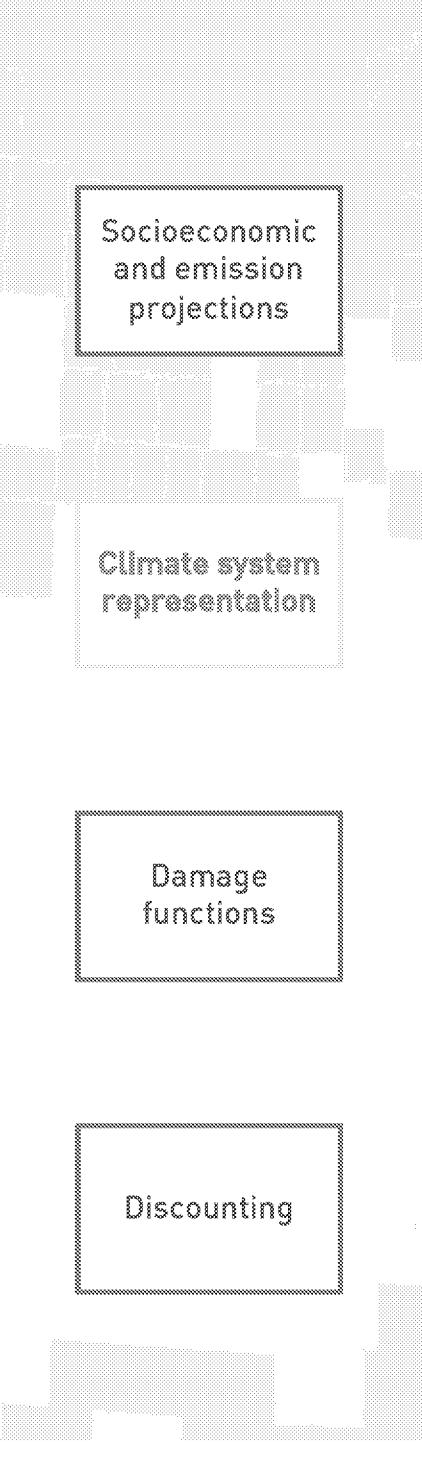
How those are addressed in the CIL SC-GHGs

- Shared Socioeconomic Pathways (SSPs) serve as benchmark scenarios
- OECD Env-Growth model and IIASA GDP model variants of the SSPs provide Gross Domestic Product (GDP) per capita projections for a wide range of countries.
- When RFF publishes expert elicitation socioeconomic projections, these will be included as an option in CIL SC-GHGs as well.
- Emissions scenarios consistent with the latest Coupled Model Intercomparison Phase 6 scenarios used by the climate modeling community
- We employ SSP2-4.5, SSP4-6.0, and SSP3-7.0 emissions scenarios, which represent widely divergent emissions and climatic pathways, especially in years beyond 2050.
- Consistent with NASEM near-term recommendation to use statistical methods and expert judgement for projecting distributions of economic activity, population growth, and emissions into the future.

The Climate Impact Lab has addressed all four key areas, drawing on the best available science and economics and NASEM recommendations

2. Climate system representation

- IAMs: Reduced form models based on economists' interpretation of climate science. Sluggish response to carbon dioxide emissions, no local climate information.
- CIL: Fair simple climate model with prompt response to emissions consistent with state-of-the-art models. Localized climate data from a comprehensive ensemble of GCMs.



CLIMATE SYSTEM REPRESENTATION

Using modern climate science

Shortcomings in the Interim SC-GHGs

- IAMs' climate models represent economists' interpretation of climate science
- As noted by the IPCC and NAS, key findings of the last decade+ of coupled climate/carbon cycle modeling show that peak warming in response to a pulse emissions of carbon dioxide (such as that used to calculate the SC-CO₂) occur within about a decade and lasts for centuries – this is not reflected in IAMs.
- IAMs do not resolve local climate

How those shortcomings are addressed in the CIL SC-GHGs

- Finite Amplitude Impulse Response (FaIR) simple climate model satisfies key criteria for a simplified climate module used to estimate SC-GHGs, including those outlined by NASEM, and was highlighted by NASEM
- We use FaIR model (v1.6.0 at the time of computation).
- Highly spatially and temporally resolved damage estimates derived from a suite of high-resolution global climate models (GCMs), consistent with NAS near-term recommendations

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

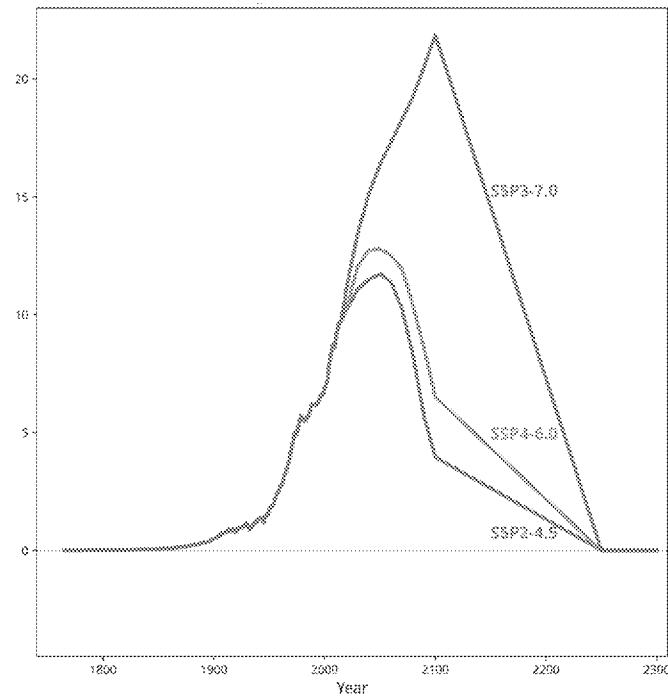
Discounting

CLIMATE SYSTEM REPRESENTATION

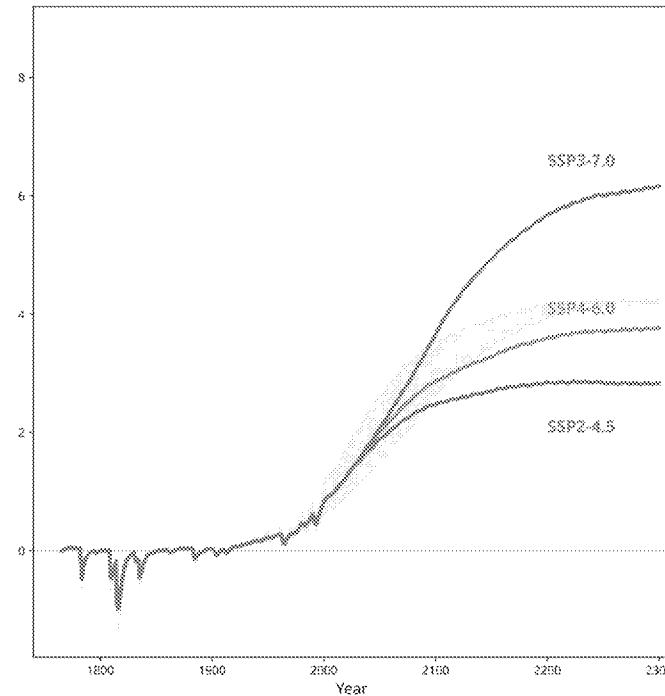
Climate projections

From emissions to temperature to sea level rise

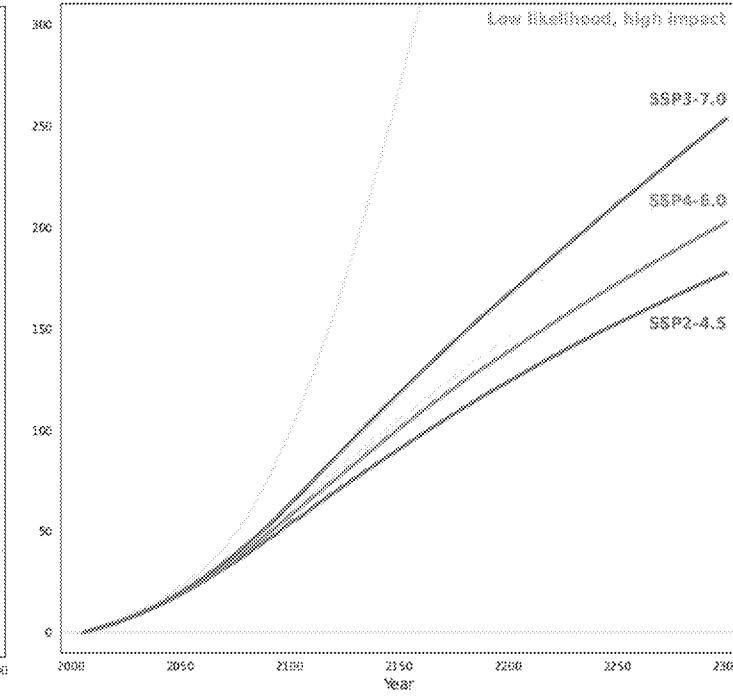
CO₂ Emissions from Fossil Fuels [GtC]



Global Mean Surface Temperature
Relative to 1850-1900 Average (°C)



Global Mean Sea Level
Relative to 2005 (cm)



Socioeconomic
and emission
projections

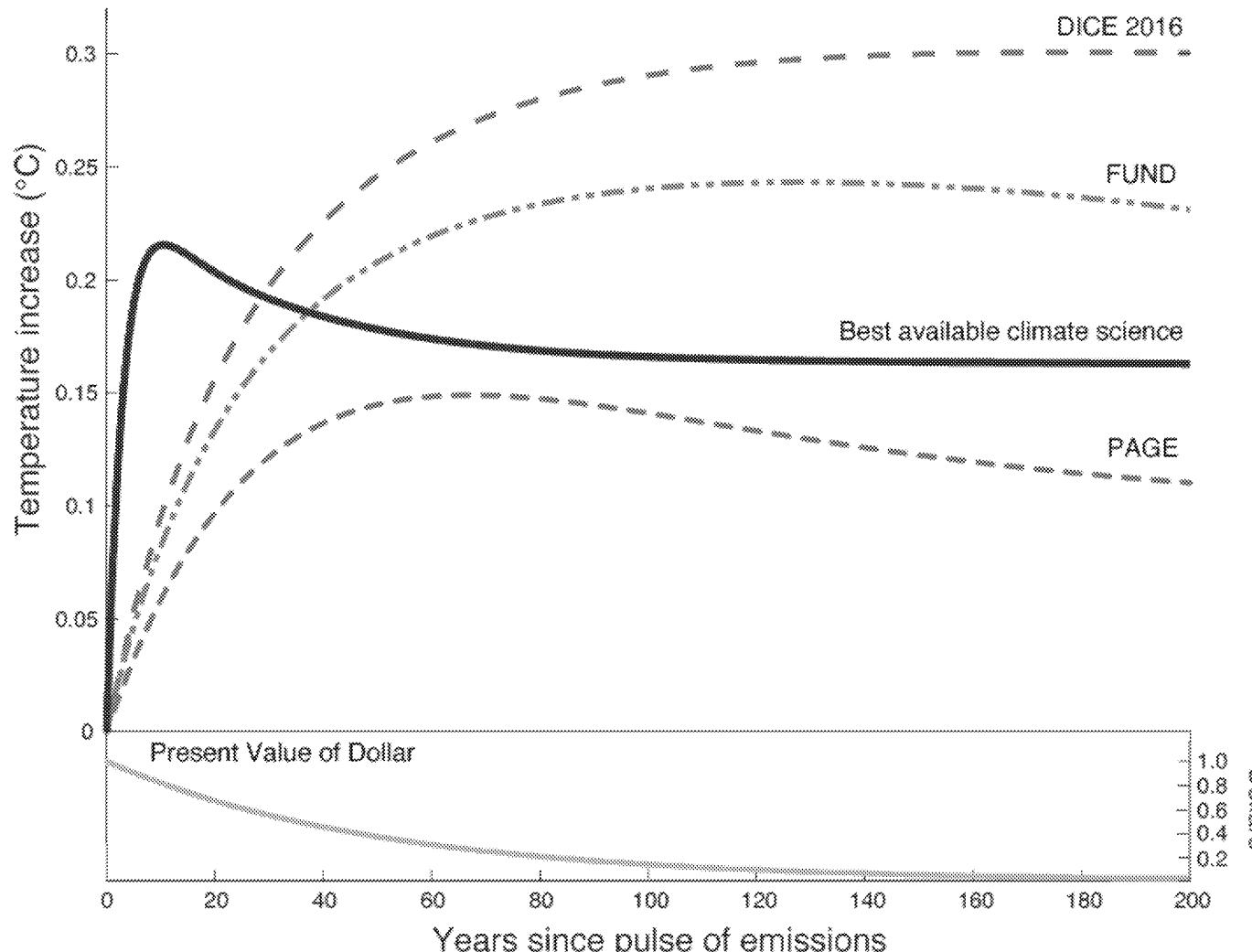
Climate system
representation

Damage
functions

Discounting

CLIMATE SYSTEM REPRESENTATION

The IAMs miscalculate the speed of warming and ignore carbon cycle feedbacks



Source: Carleton & Greenstone (2021) adapted from Dietz, et al. (2020)

Socioeconomic
and emission
projections

Climate system
representation

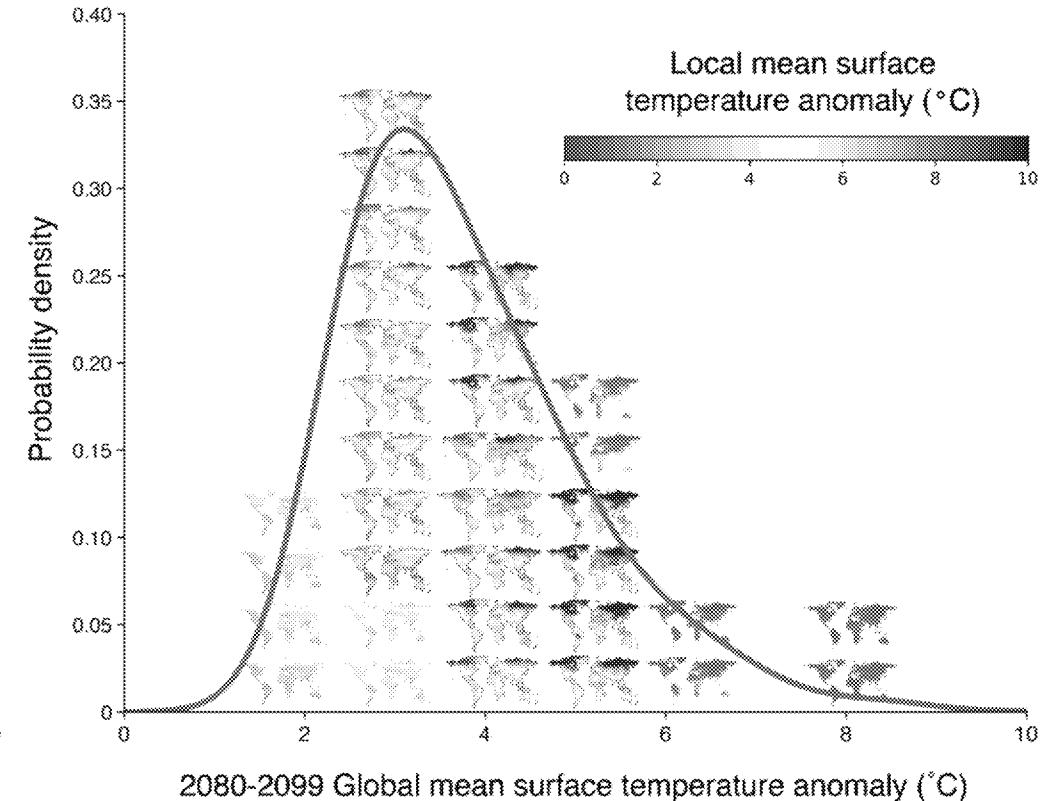
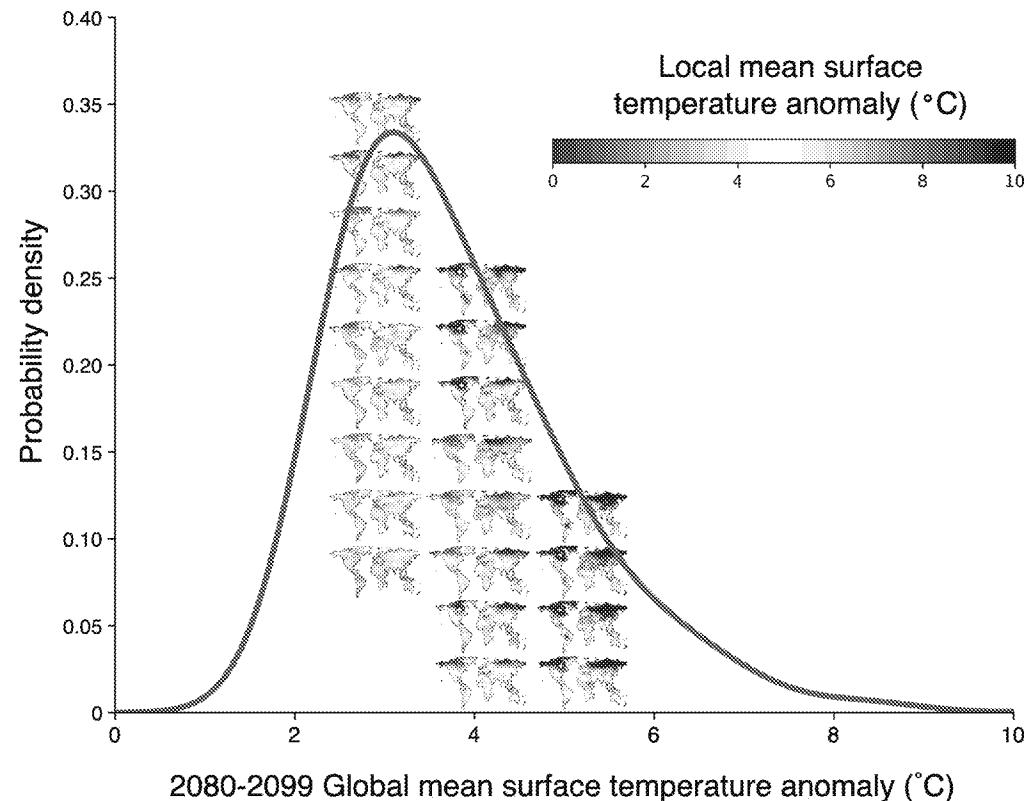
Damage
functions

Discounting

CLIMATE SYSTEM REPRESENTATION

Climate projections

Ensuring localized climate reflect full climate uncertainty



Source: Climate Impact Lab (2021)

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Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

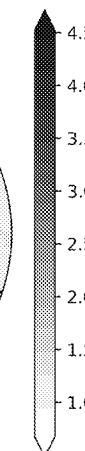
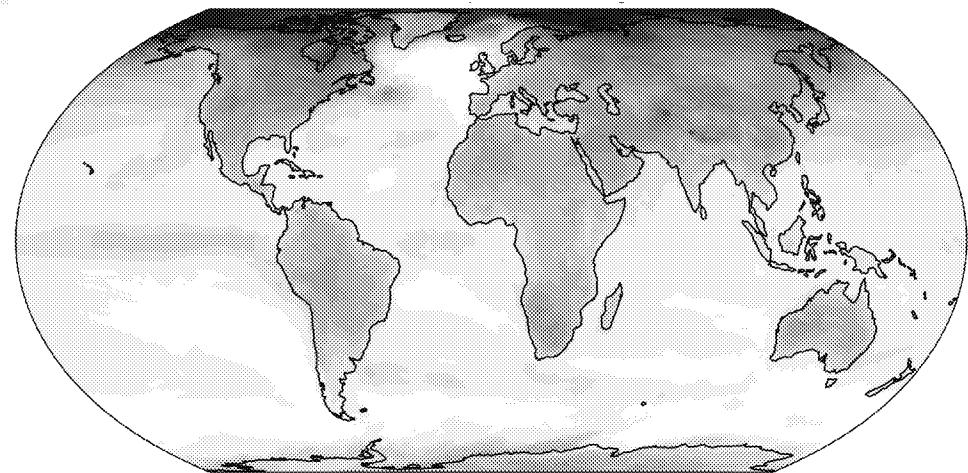
Discounting

CLIMATE SYSTEM REPRESENTATION

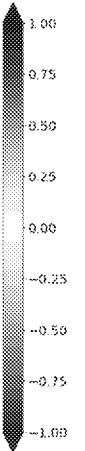
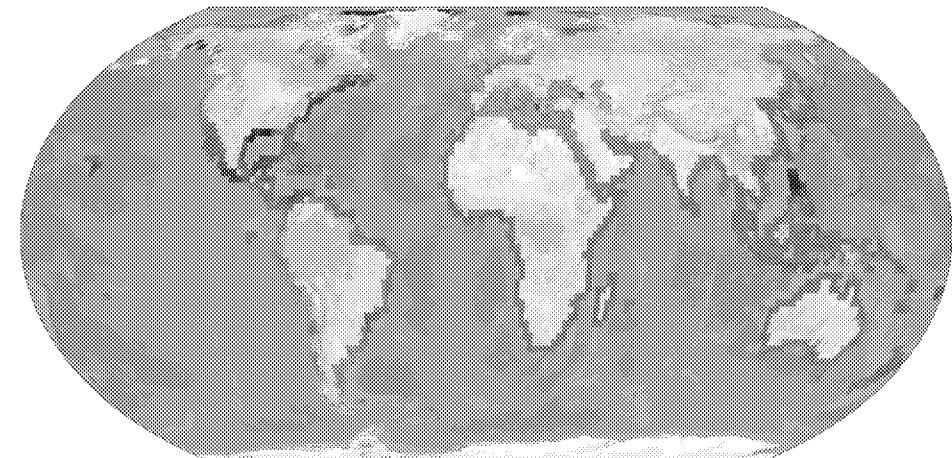
Climate projections

High resolution temperature and sea level rise projections, relative to 1995-2014

2090 Median Surface Temperature Change ($^{\circ}\text{C}$), RCP 4.5



2090 Median Sea Level Rise (m), RCP 4.5



The Climate Impact Lab has addressed all four key areas, drawing on the best available science and economics and NASEM recommendations

3. Damage functions

- IAMs: Methodologically inconsistent and geographically limited damage functions with no empirical basis and often no supporting publications or other documentation.
- CIL: Empirically-based damage functions based on globally-representative data, that employ modern scientific methods and include both the cost and benefits of adaptation.

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

DAMAGE FUNCTIONS

Moving to evidence-based damage functions

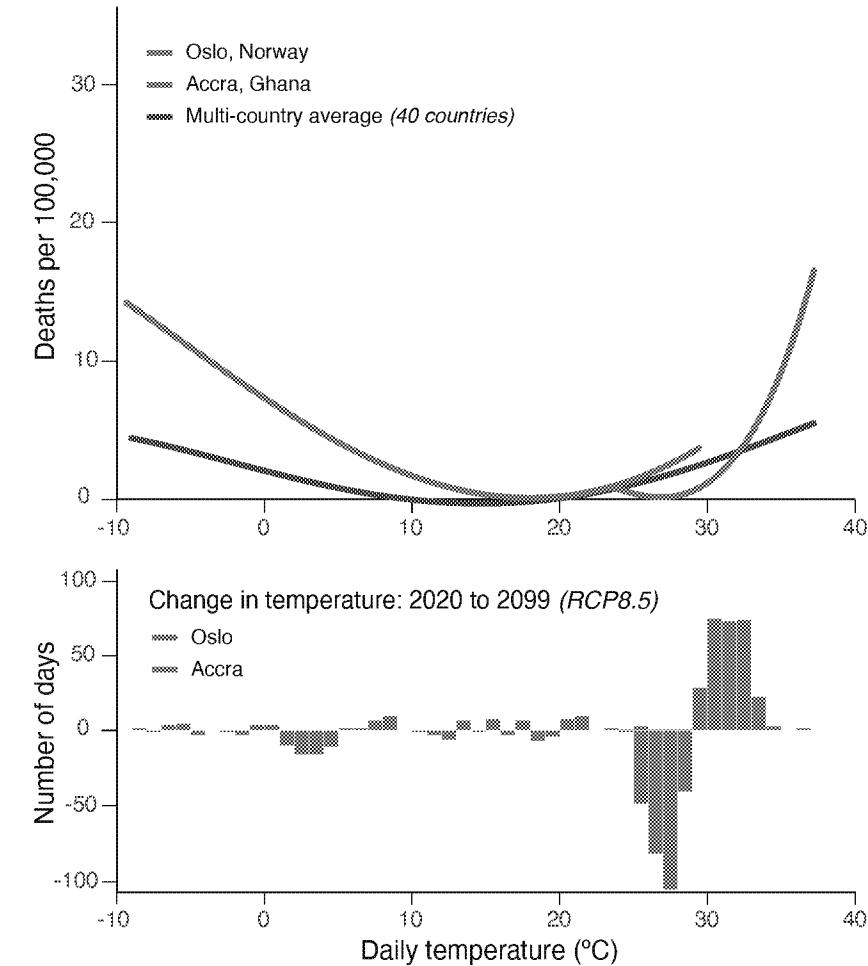
Shortcomings in the Interim SC-GHGs

- Derived from ad-hoc assumptions
- Limited empirical data only from wealthy economies
- Ignore distributional impacts (at most 16 global regions)
- Inconsistent assumptions about adaptation

How these shortcomings are addressed

in the CIL SC-GHGs

- Derived directly from empirical analysis
- Based on large-scale, globally-representative data
- Capture local non-linearities (~25,000 global regions)
- Inclusive of empirically-based estimates of adaptation investments and their costs



DAMAGE FUNCTIONS

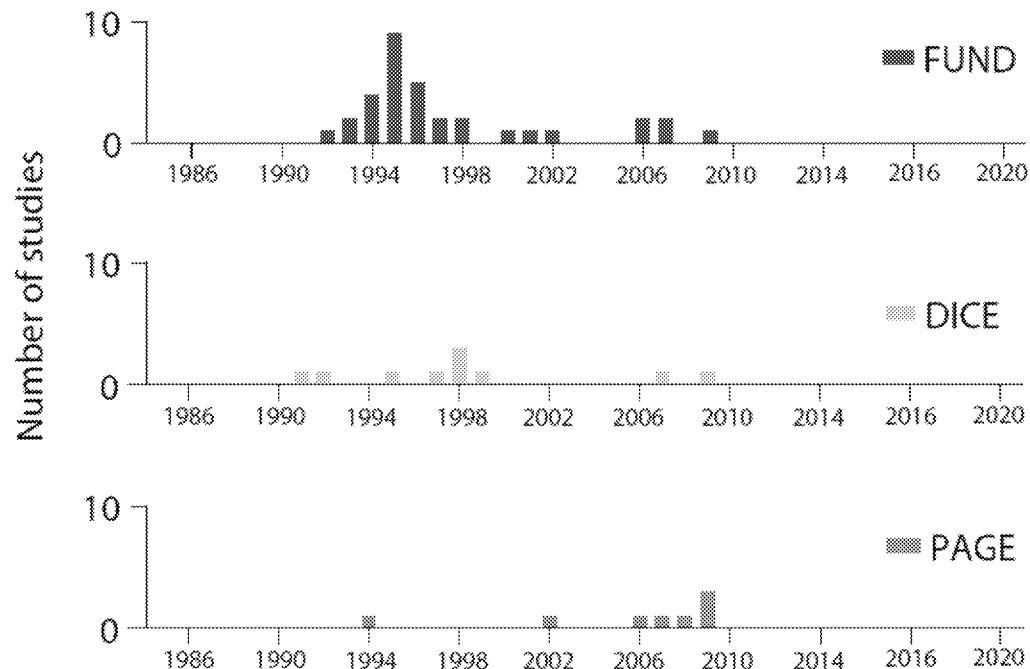
The research underpinning the current IAMs is decades out of date

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting



The models should be revised more frequently to accommodate scientific developments... the structure and in some cases the calibration of the damage models is stuck in the 1990s, when the original versions were created...

- Revesz et al (Nature, 2014)

Socioeconomic
and emission
projections

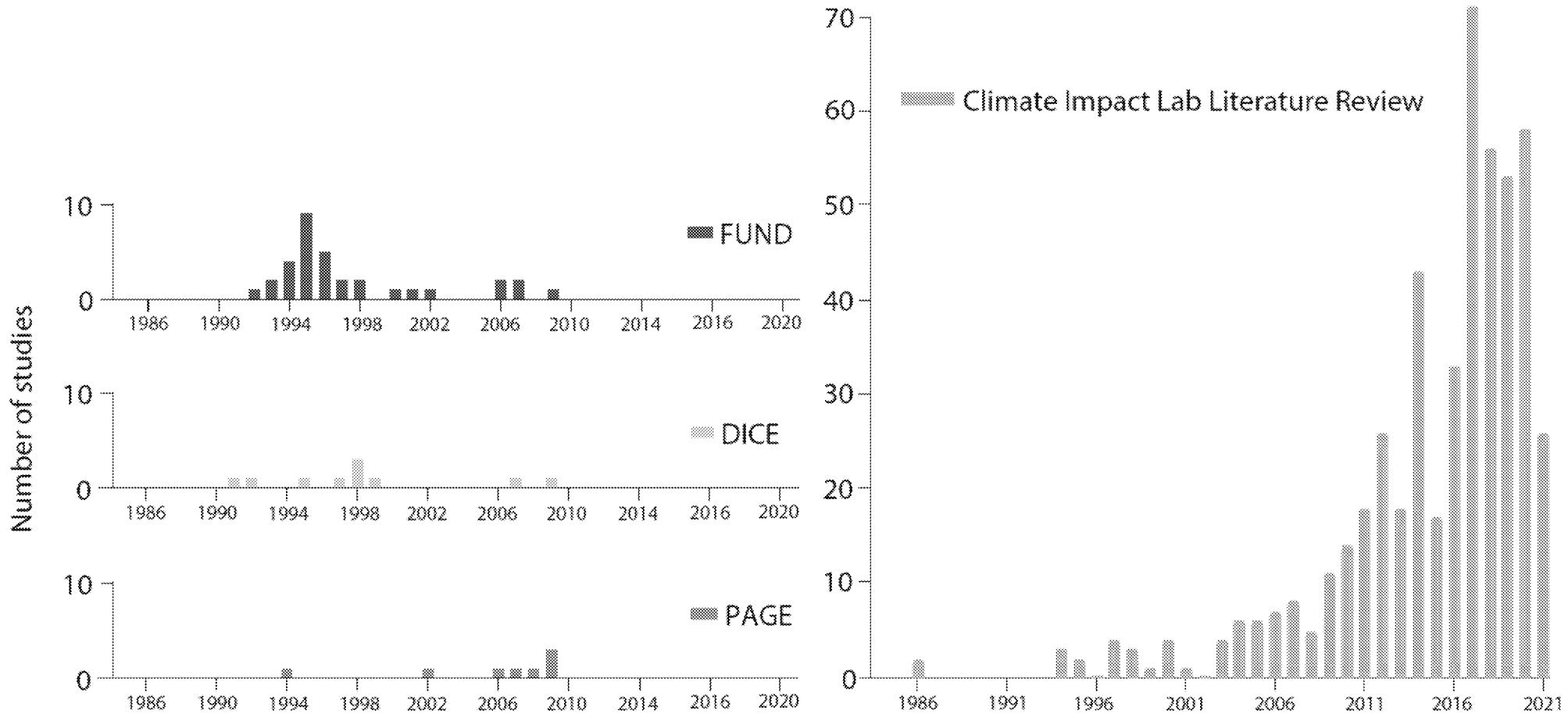
Climate system
representation

Damage
functions

Discounting

DAMAGE FUNCTIONS

**The current IAMs have completely missed the explosion in climate
econometric research**



Socioeconomic
and emission
projections

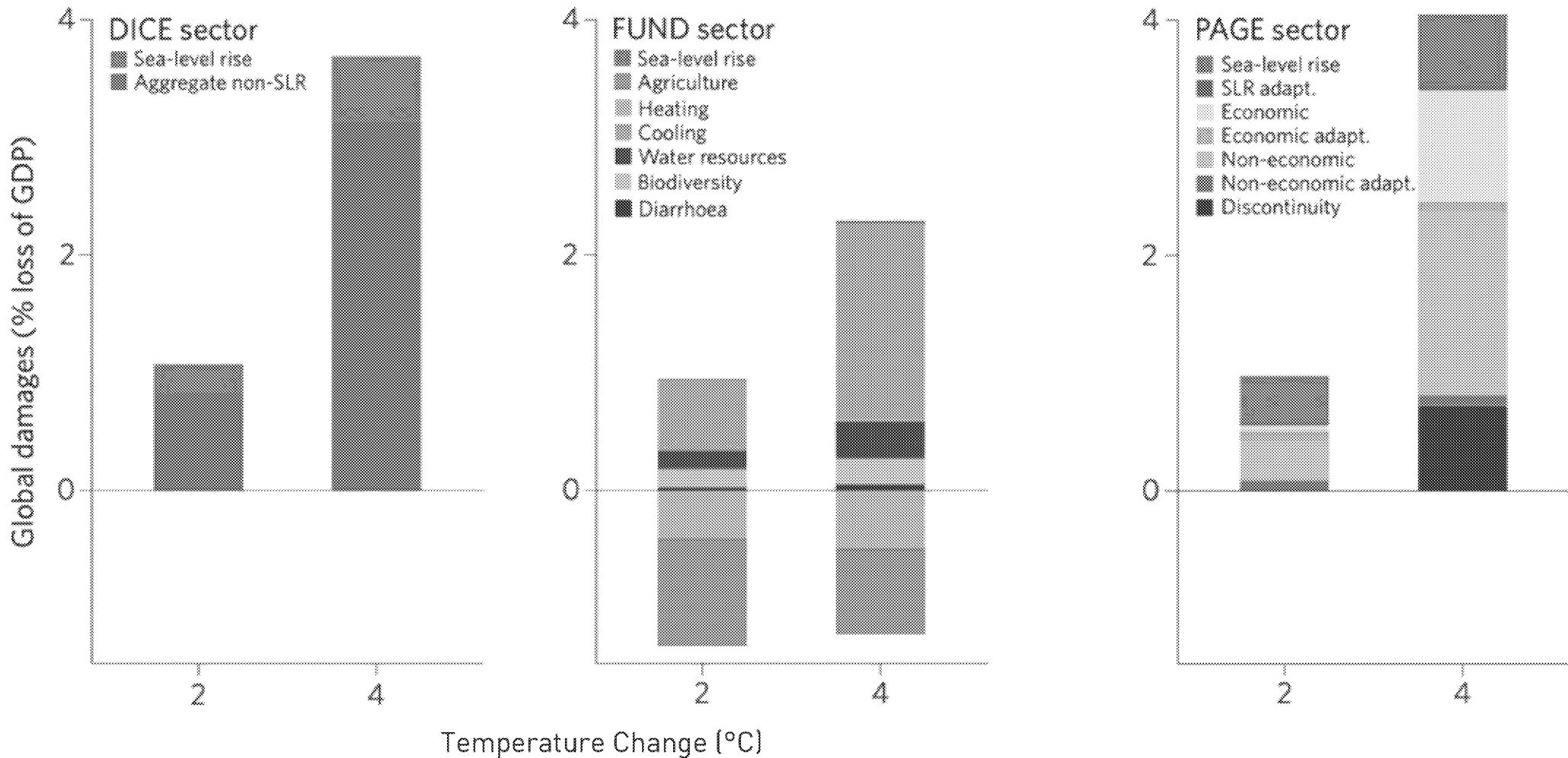
Climate system
representation

Damage
functions

Discounting

DAMAGE FUNCTIONS Under the hood of the current IAMs

DICE-2010, FUND v.3.8, PAGE09



Source: Moore and Diaz (2017)

*FUND sectors also include forests, tropical/extratropical storms, vector-borne diseases, morbidity, migration, and cardiovascular/respiratory mortality. These are included in the bar chart, but are not visible due to the magnitude of their contribution to the SCC.

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DAMAGE FUNCTIONS

The Climate Impact Lab's process for building data-driven damage functions

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

Step 1: Collect and harmonize comprehensive data for each sector

Step 2: Estimate causal impact relationships, accounting for key drivers of adaptation

Step 3: Develop a revealed preference approach to infer costs of adaptation

Step 4: Project impacts globally today and into the future using high resolution climate projections

Step 5: Estimate empirical damage functions accounting for uncertainty

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

DAMAGE FUNCTIONS

Climate Impact Lab current coverage

Mortality — heat and cold deaths

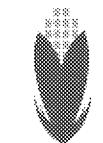
All cause mortality (<5) All cause mortality (>64)

All cause mortality (5-64)



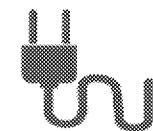
Agriculture — crop yields

Maize	Wheat	Rice
Soybean	Sorghum	Cassava



Energy — energy and electricity demand

Electricity consumption
Other fuels consumption



Labor — labor supply effects

High risk labor
Low risk labor



Coastal — sea level rise and storm damages

Sea level rise inundation
[Tropical cyclone damage]



Socioeconomic
and emission
projections

Climate system
representation

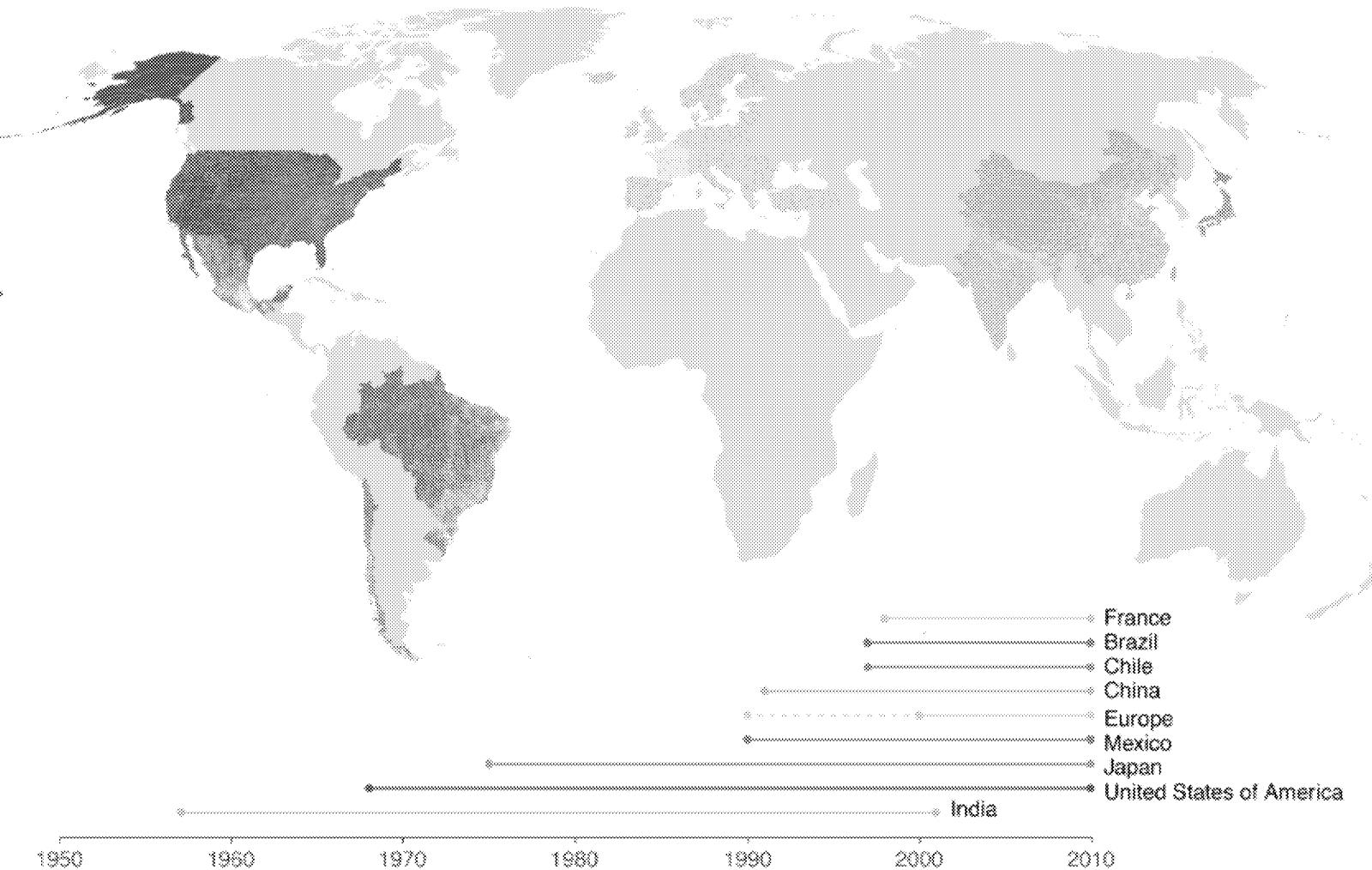
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 1: Data collection

Mortality sector as an example



Source: Climate Impact Lab (2021)

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DAMAGE FUNCTIONS

Step 1: Data collection

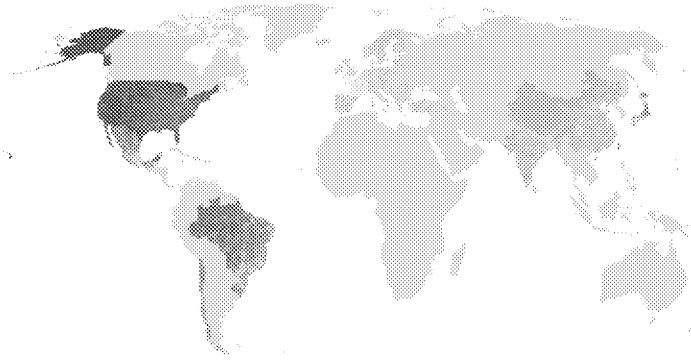
Socioeconomic
and emission
projections

Climate system
representation

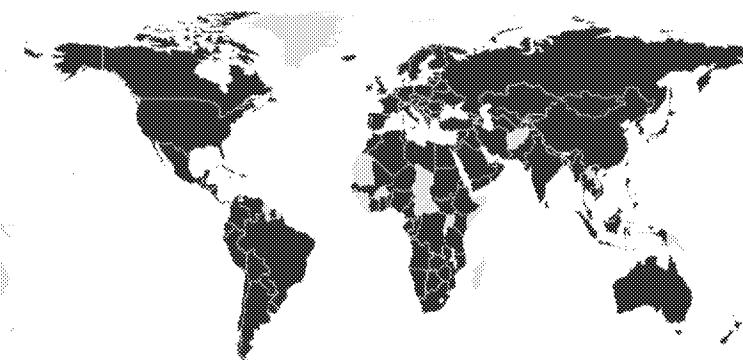
Damage
functions

Discounting

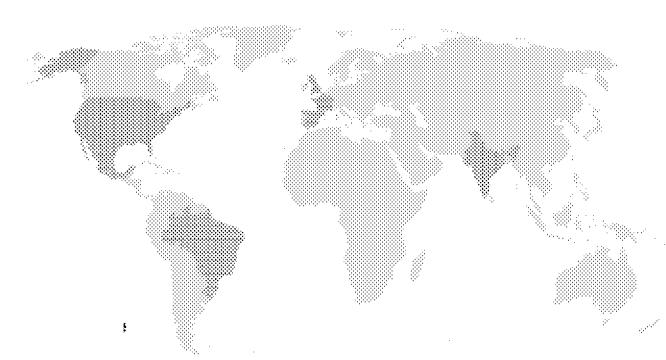
All Cause Mortality



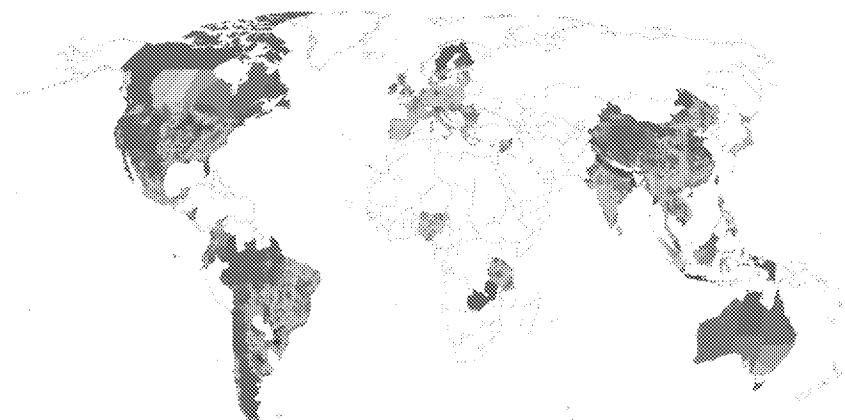
Energy



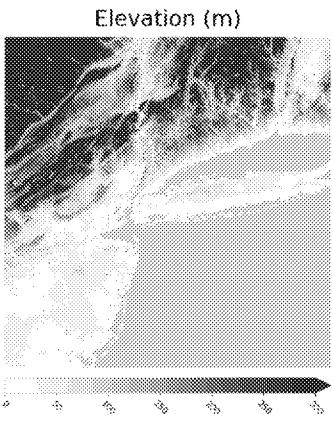
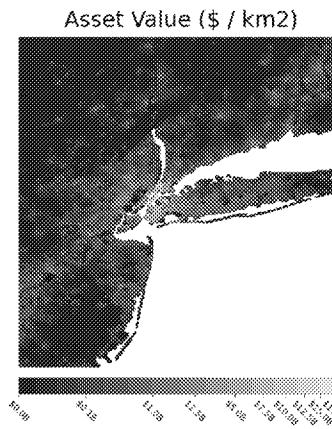
Labor



Agriculture



Coastal



Source: Climate Impact Lab (2021)

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Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

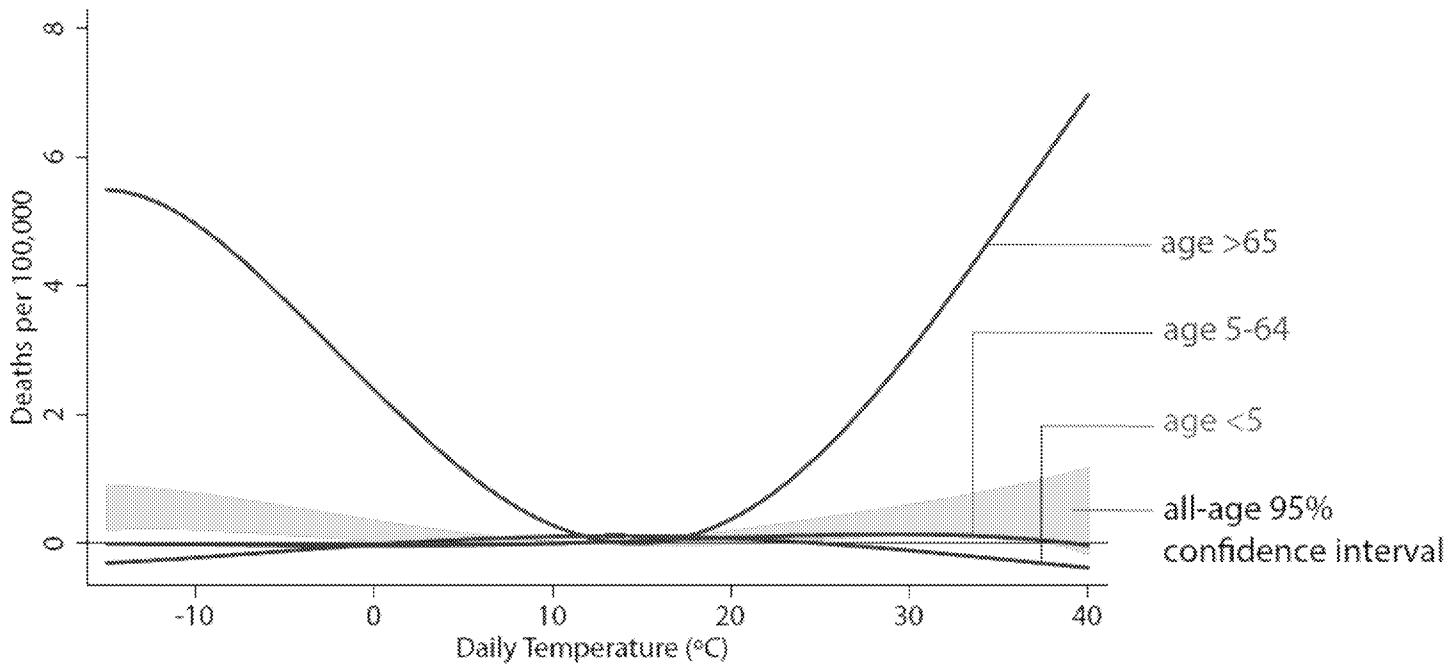
Discounting

DAMAGE FUNCTIONS

Step 2: Estimate an impact relationship

Use random variation in short-run weather to causally identify the effect of climate conditions on sector-specific outcomes.

$$\text{Mortality_rate}_{ait} = f_a(\text{Temp}_{it}, \text{Precip}_{it}) + \underbrace{\alpha_{ai} + \delta_{act}}_{\text{nonparametric location}} + \epsilon_{iat}$$



Source: Climate Impact Lab (2021)

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DAMAGE FUNCTIONS

Step 2: Estimate an impact relationship

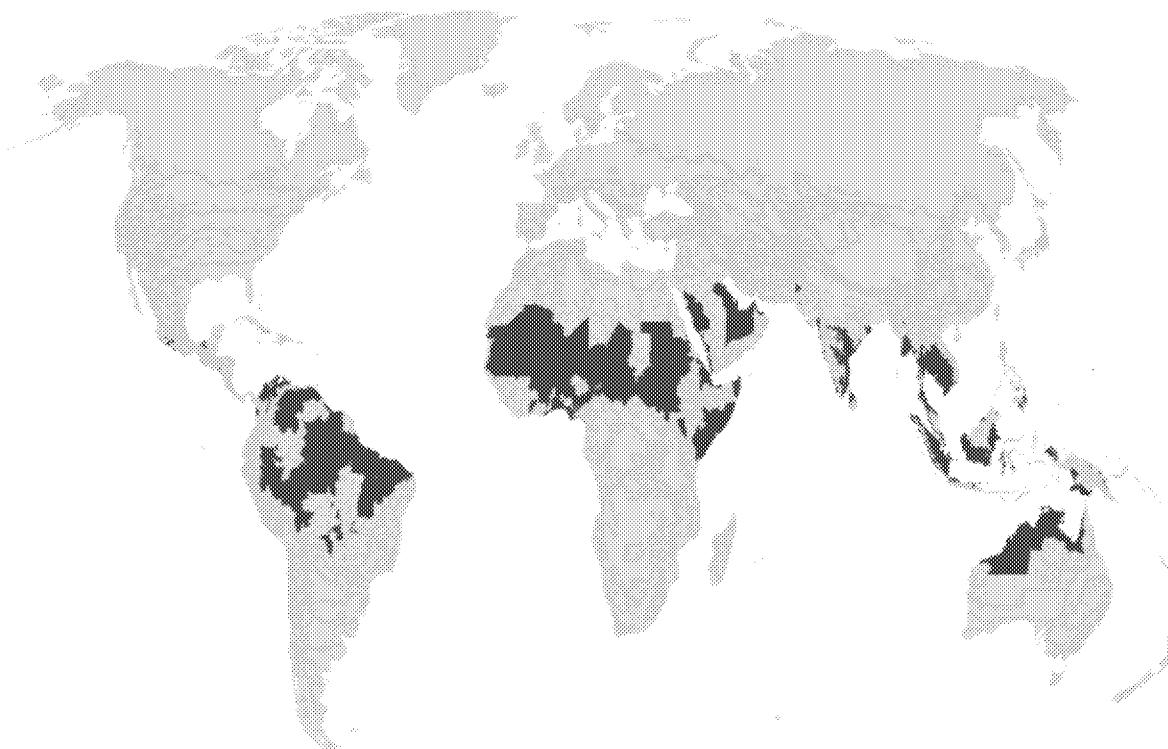
Effect day at 35°C relative to 20°C for ages 65 and over. Coefficient calculated for deciles of TMEAN (red shaded area).

Socioeconomic
and emission
projections

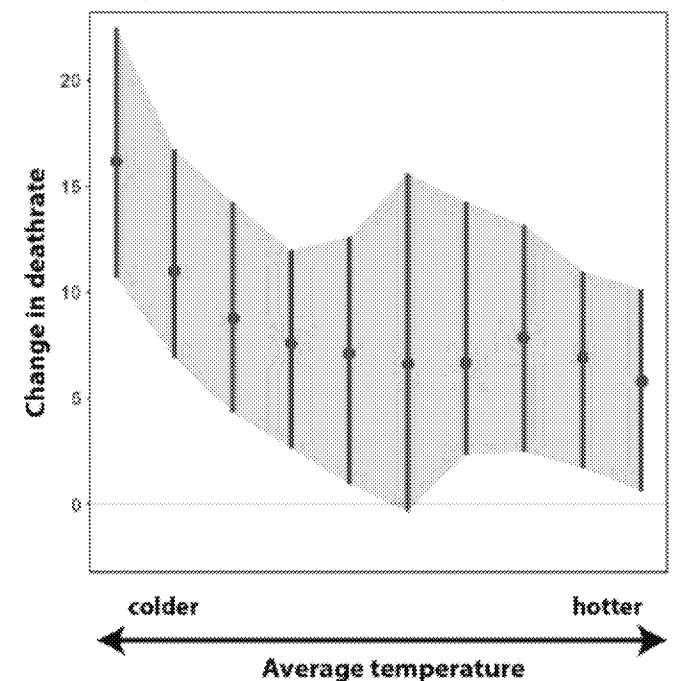
Climate system
representation

Damage
functions

Discounting



Response at 35°C relative to 20°C for ages 65 and over



Source: Climate Impact Lab (2021)

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Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 3: Quantify the costs and benefits of adaptation

Our novel approach

Drawing on previous work, we develop a new method to estimate the costs incurred by populations as they adapt to warming

- Guo & Costello, (JEEM, 2013); Deryugina & Hsiang (NBER, 2017)

Intuition

- People invest in adaptive behaviors and technologies until the costs of doing so just equal the protective benefits
- We observe the protective benefits -- changes in sensitivity of outcomes to temperature as the climate gradually warms
- We use measures of these benefits to back out the costs

Socioeconomic
and emission
projections

Climate system
representation

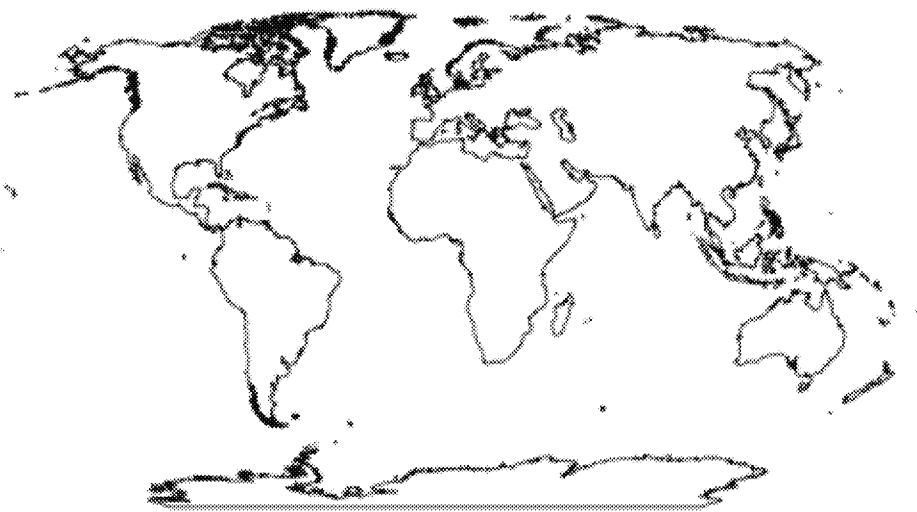
Damage
functions

Discounting

DAMAGE FUNCTIONS

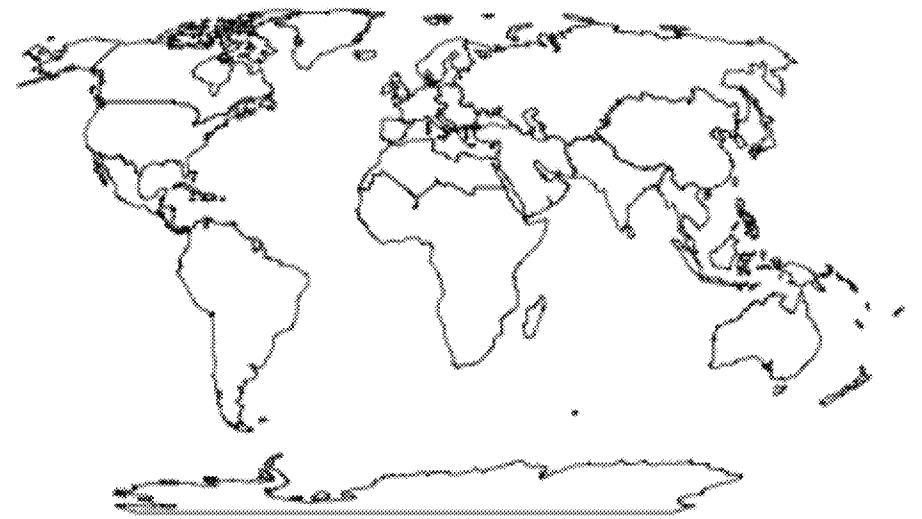
Step 4: Project global damages

Spatial resolution of the Interim SC-GHGs



DICE (1992)

1 region



FUND (1996)

16 regions

Socioeconomic
and emission
projections

Climate system
representation

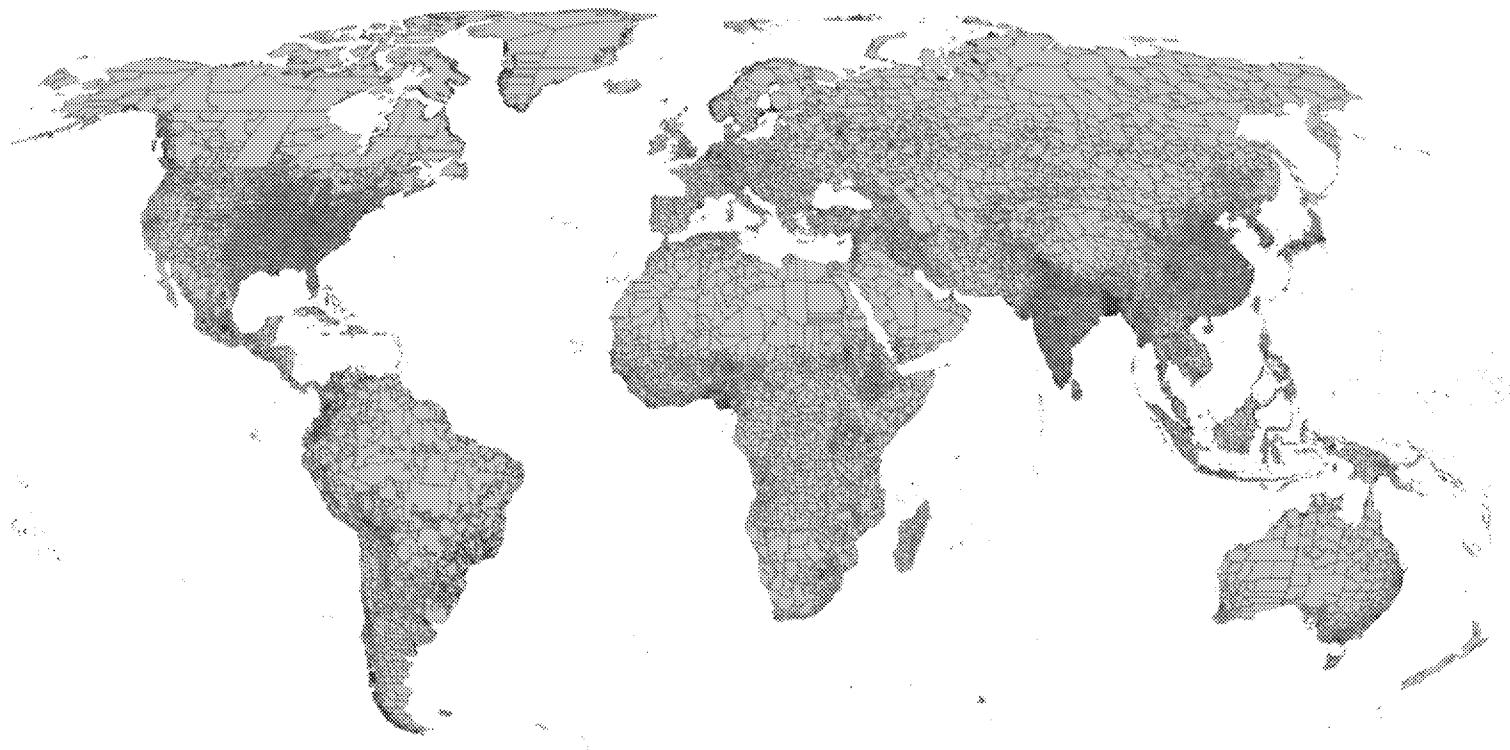
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 4: Project global damages

Reimagining possibilities with distributed computing



Climate Impact Lab (2021)

24,378 regions

Socioeconomic
and emission
projections

Climate system
representation

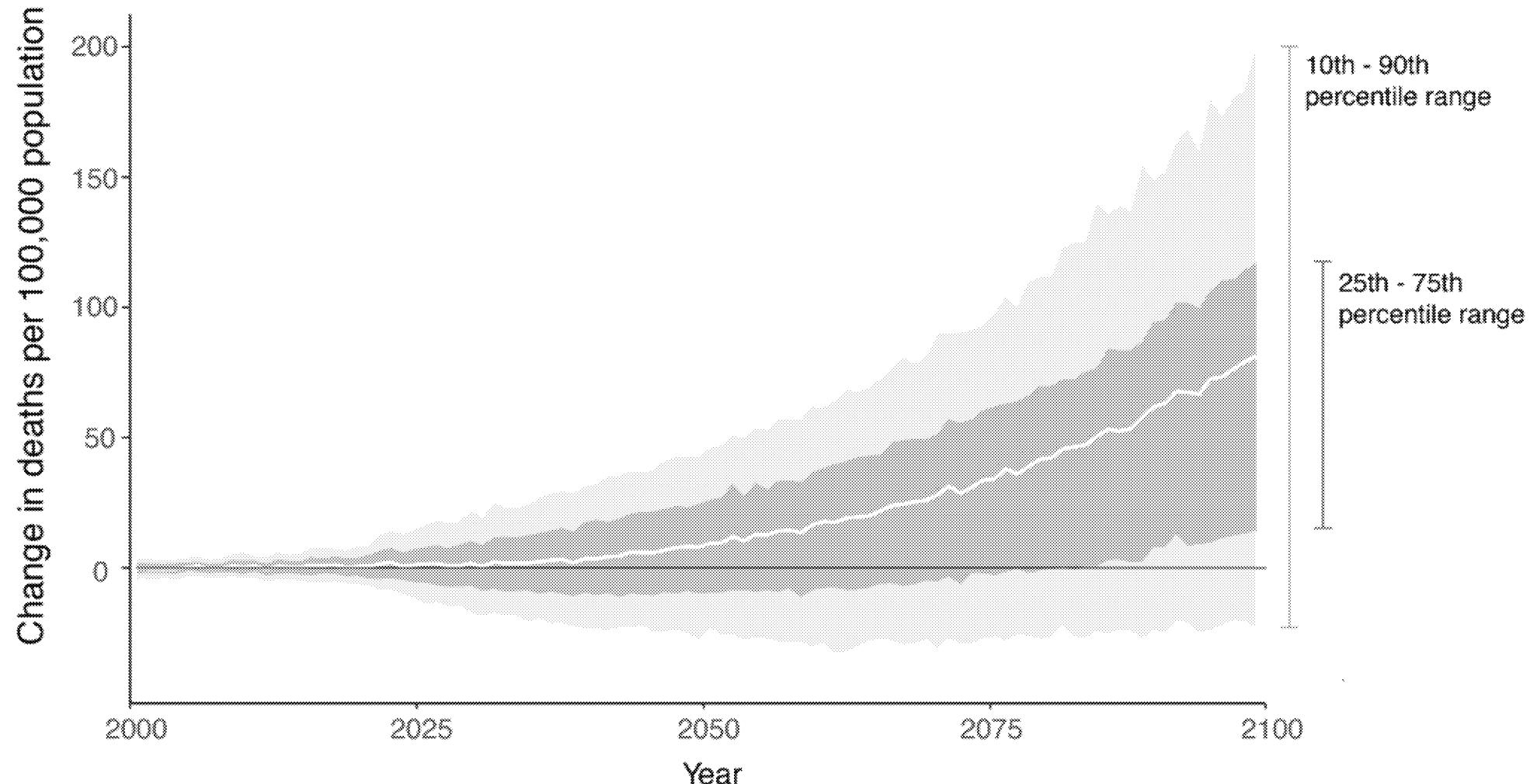
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 4: Project global damages

Aggregate impacts. RCP 8.5 and SSP3



Socioeconomic
and emission
projections

Climate system
representation

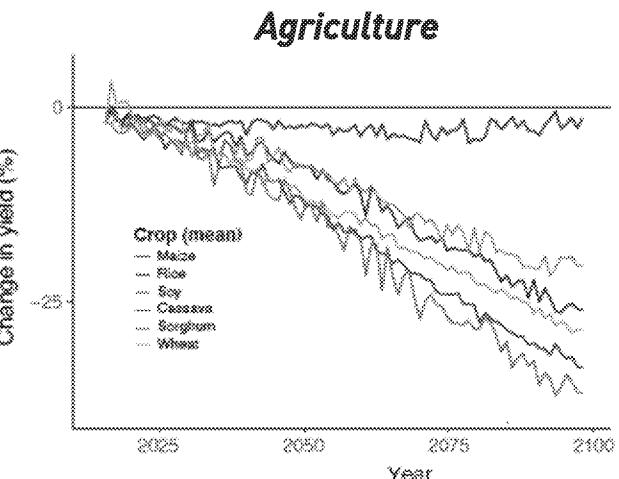
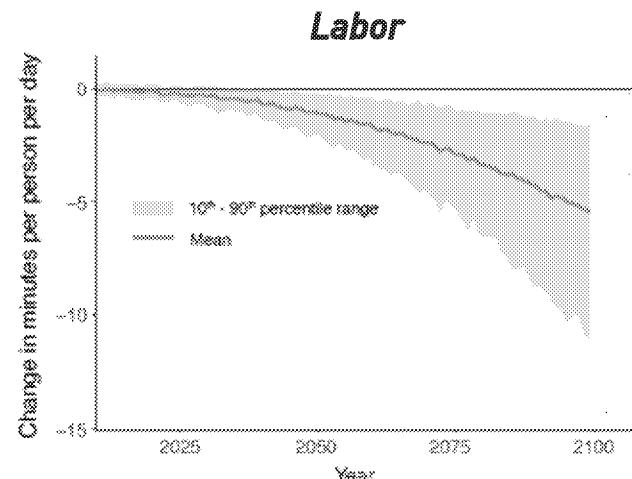
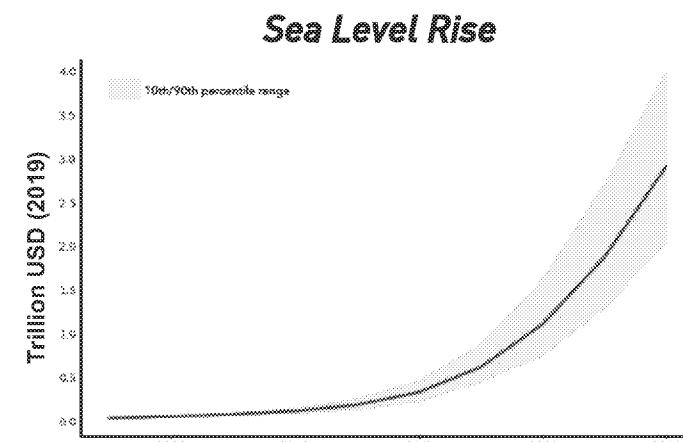
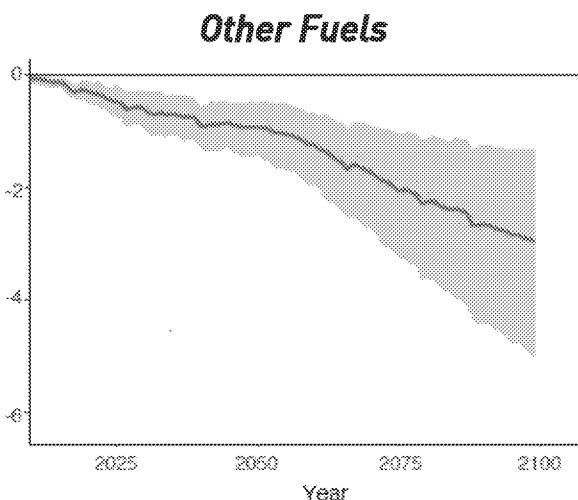
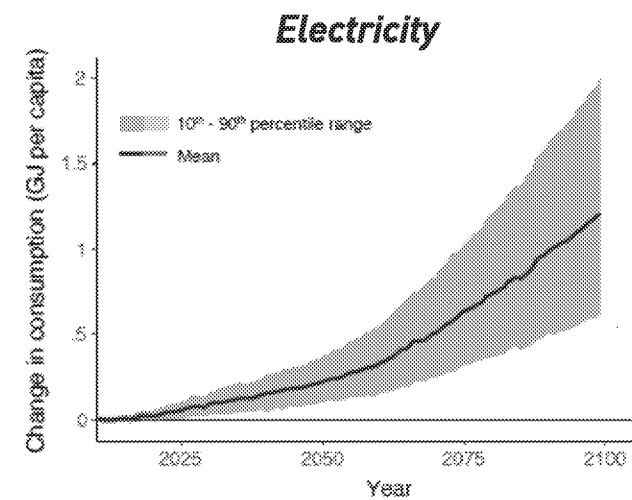
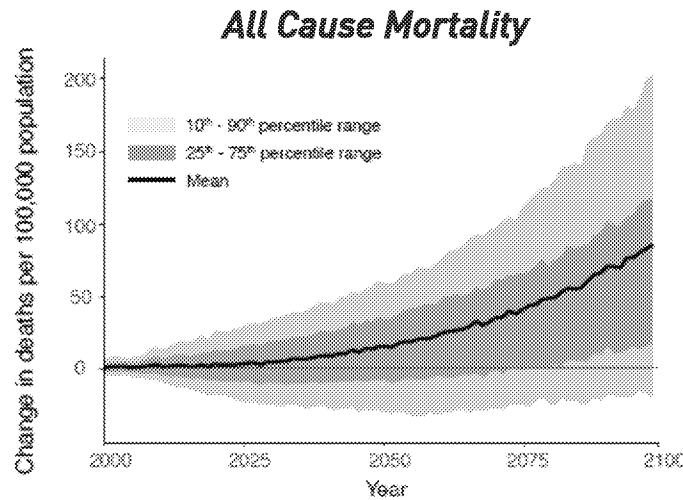
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 4: Project global damages

Aggregate impacts. RCP 8.5 and SSP3



Socioeconomic
and emission
projections

Climate system
representation

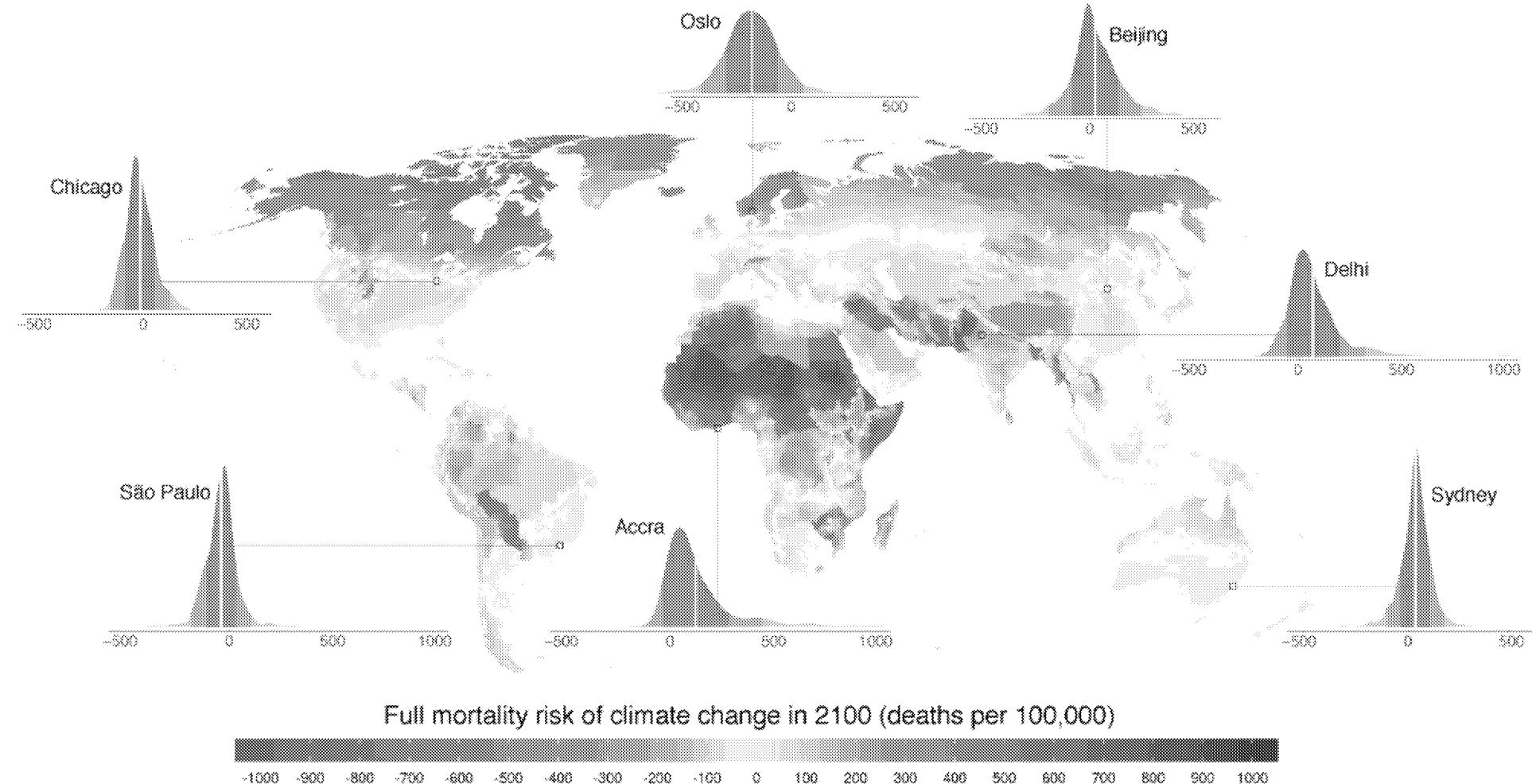
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 4: Global projections

Impacts are distributed unequally around the world. Change in mortality and adaptation costs due to warming, RCP 8.5. Estimates include econometric and climate uncertainty.



Socioeconomic
and emission
projections

Climate system
representation

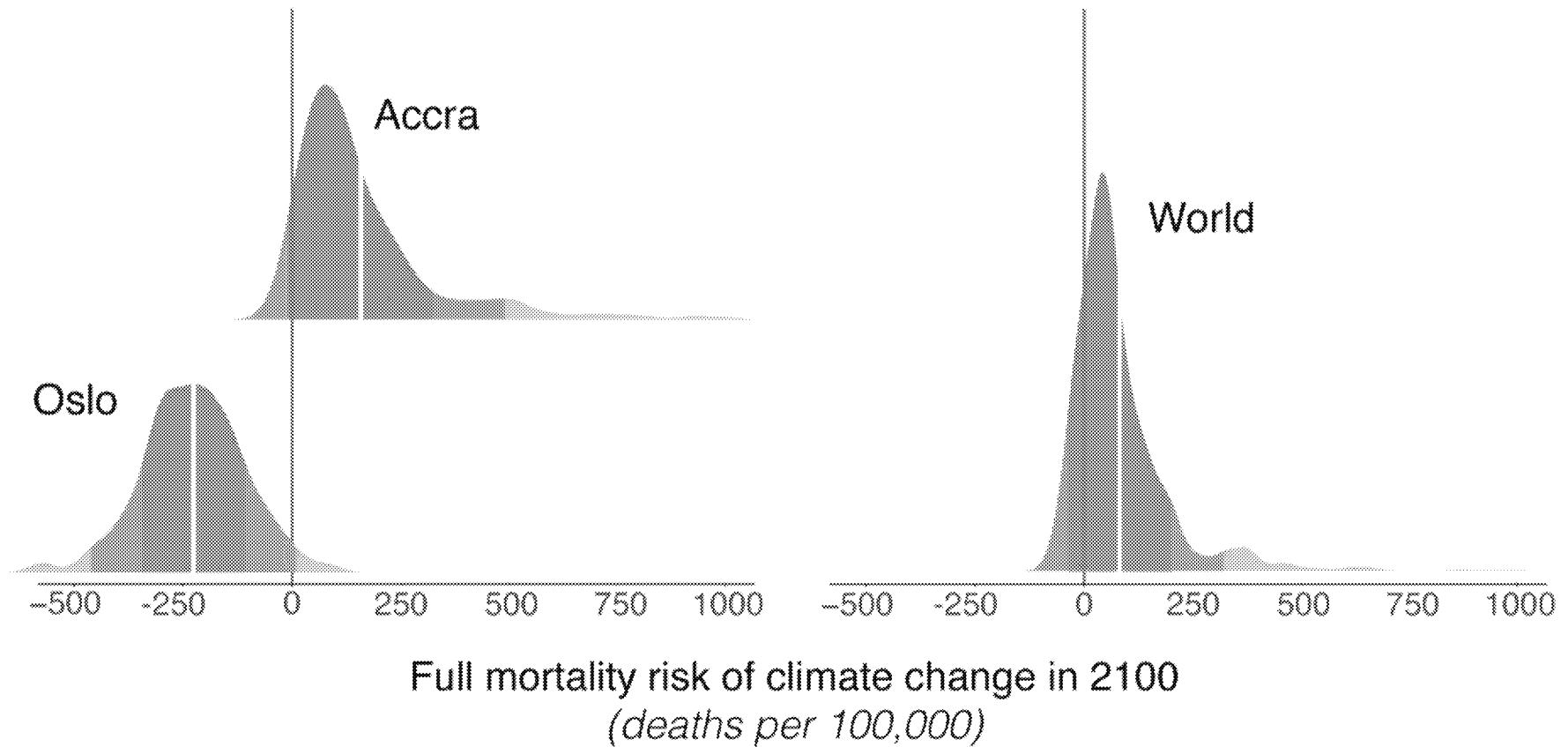
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 4: Global projections

Impacts are distributed unequally around the world. Change in mortality and adaptation costs due to warming, RCP 8.5. Estimates include econometric and climate uncertainty.



Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

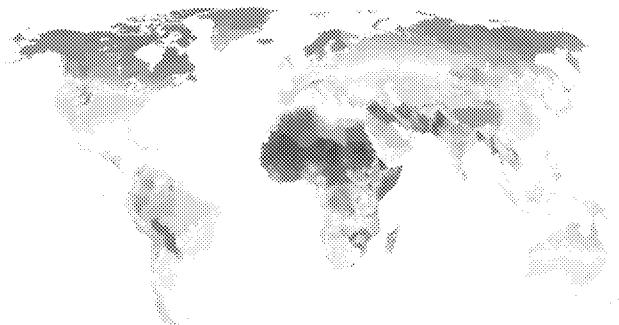
Discounting

DAMAGE FUNCTIONS

Step 4: Global projections

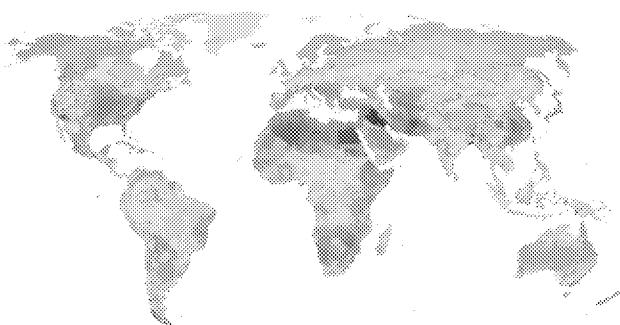
Impacts are distributed unequally around the world. Change due to warming, end of century RCP 8.5

All Cause Mortality



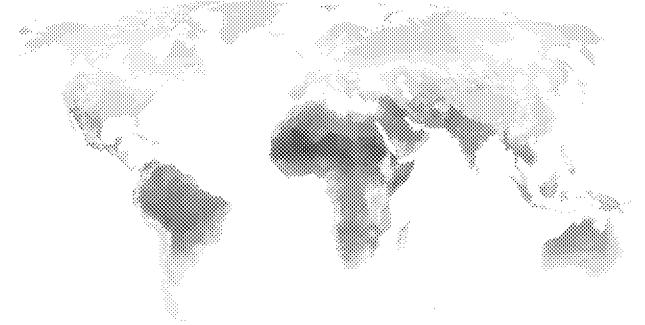
Full mortality risk of climate change in 2100 (deaths per 100,000)

Agriculture (e.g. Maize)



Log yield impacts due to climate change

Labor



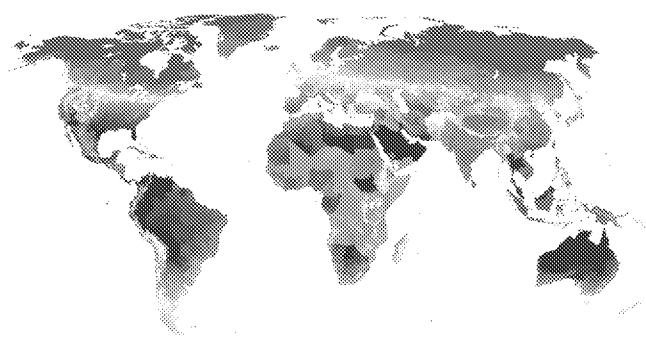
Worker disability costs of climate change (% of 2099 GDP)

Sea Level Rise



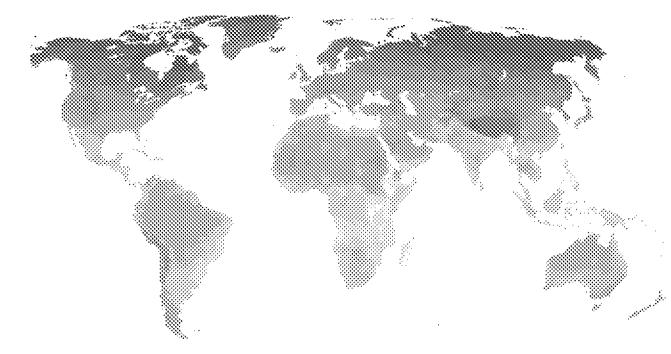
% of Impact Region GDP in 2100

Electricity



Impact of climate change on consumption in 2099 (GJ per capita)

Other Fuels



Impact of climate change on consumption in 2099 (GJ per capita)

Socioeconomic
and emission
projections

Climate system
representation

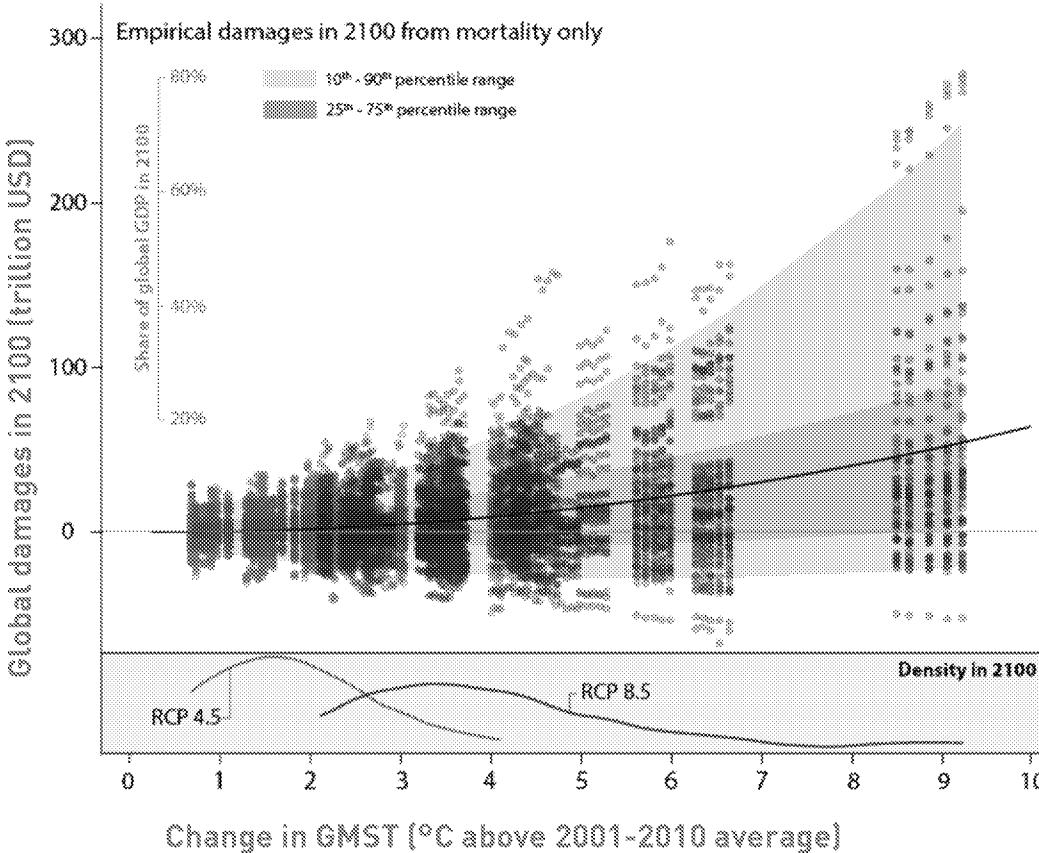
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 5: Estimate empirical damage functions

Empirical damages in 2100 from Mortality compared to IAMs



- 33 high-resolution global climate simulations for each of 2 emissions scenarios
- Spanning 2100 global temperature range from 1.4°C to 10°C above pre-industrial
- Combined with draws from econometric uncertainty
- Damage function fit to 9,750 Monte Carlo simulations for every 5 year period for more than 150,000

Socioeconomic
and emission
projections

Climate system
representation

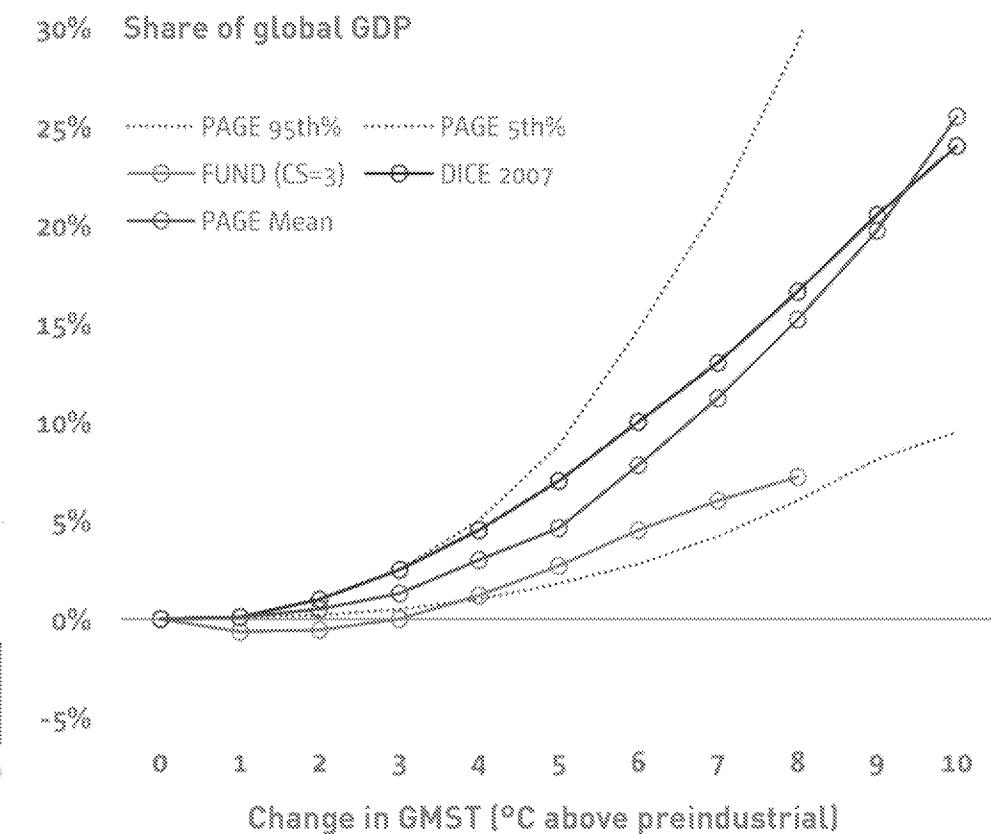
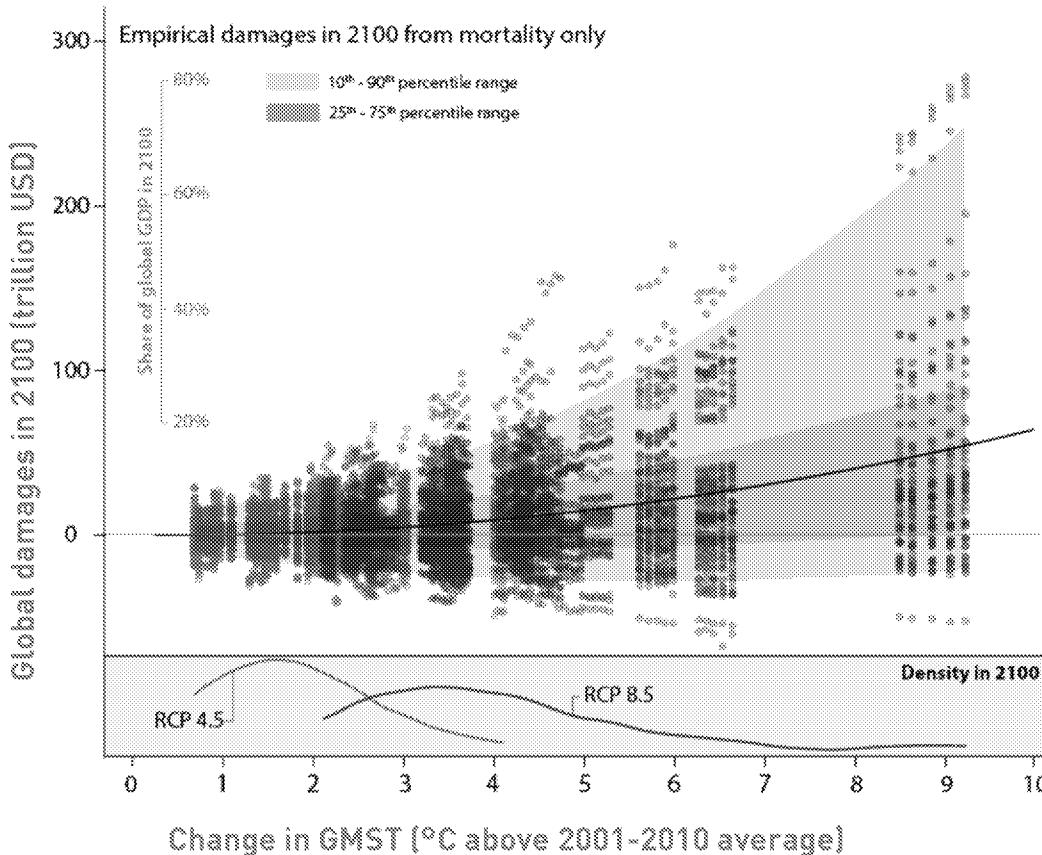
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 5: Estimate empirical damage functions

Empirical damages in 2100 from Mortality compared to IAMs



Socioeconomic
and emission
projections

Climate system
representation

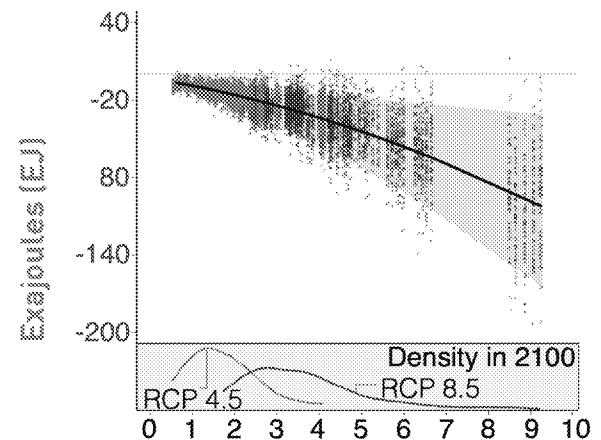
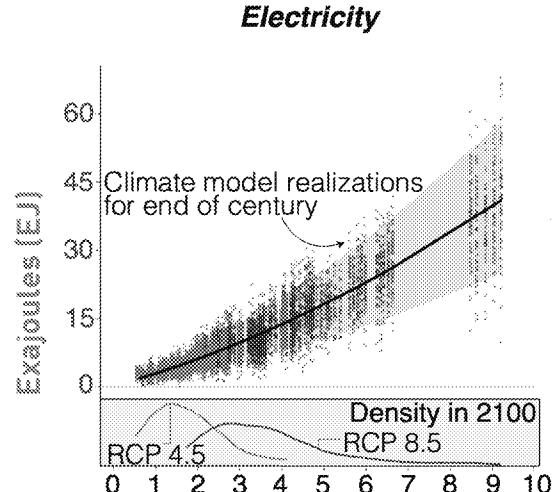
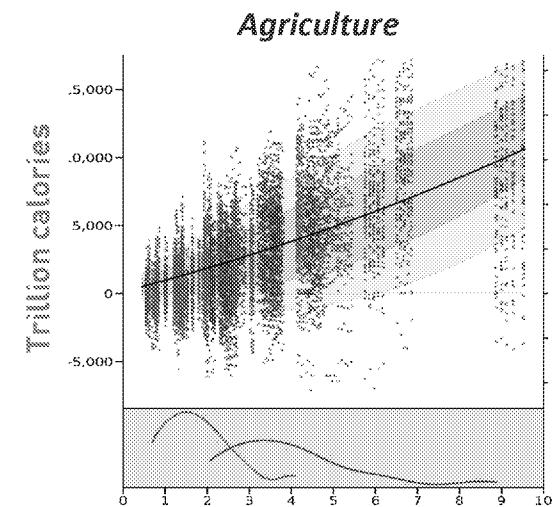
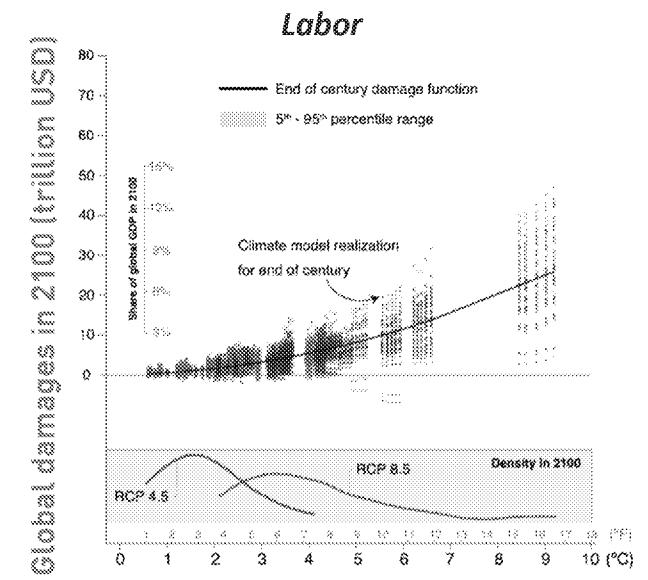
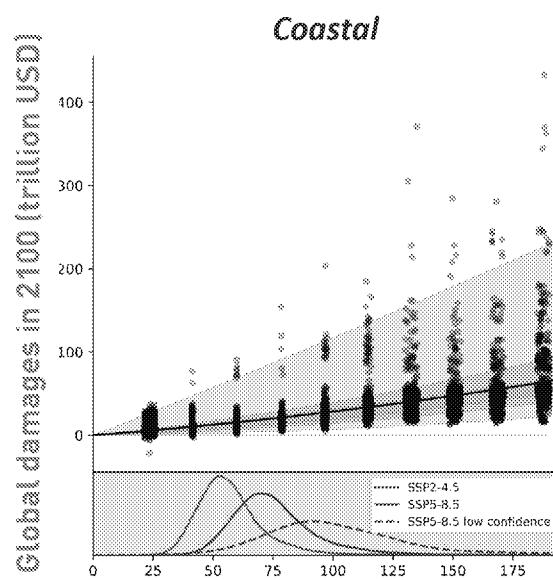
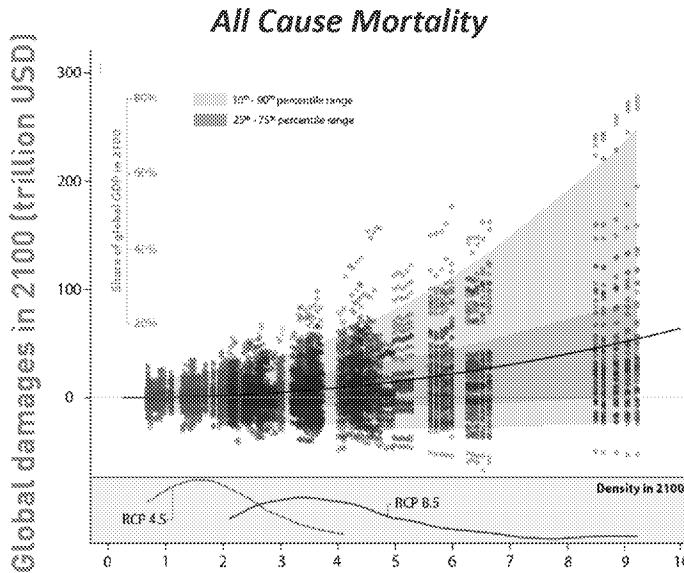
Damage
functions

Discounting

DAMAGE FUNCTIONS

Step 5: Estimate empirical damage functions

Damages scaled to change in GMST ($^{\circ}\text{C}$ above 2001-2010 average), change in GMSL (cm relative to 2005)



Source: Climate Impact Lab 2021

ED_014112B_00000319-00035

The Climate Impact Lab has addressed all four key areas, drawing on the best available science and economics and NASEM recommendations

4. Discounting

- IAMs: Fixed discount rates based on outdated capital market information. Uncertainty and equity are ignored entirely.
- CIL: Either prescriptive or descriptive discount rates and the ability to capture both uncertainty and equity.

Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

DISCOUNTING

An updated approach to discounting

Shortcomings in the Interim SC-GHGs

- Consumption interest rates are now below the 3% estimate used in the Interim TSD
- Ignores discount rate uncertainty
- Ignores endogeneity of discount rate to future economic growth (i.e., Ramsey discounting)

How those are addressed in the CIL SC-GHGs

Options are included to enable multiple discounting approaches, including:

- Declining “descriptive” discount rate schedules
- Ramsey discounting (“prescriptive” approach, recommended by the NASEM 2017 report)
- Prescriptive and descriptive discounting including valuation of uncertainty
- Prescriptive and descriptive discounting including welfare consequences of unequal climate damages within and across countries

Socioeconomic
and emission
projections

Climate system
representation

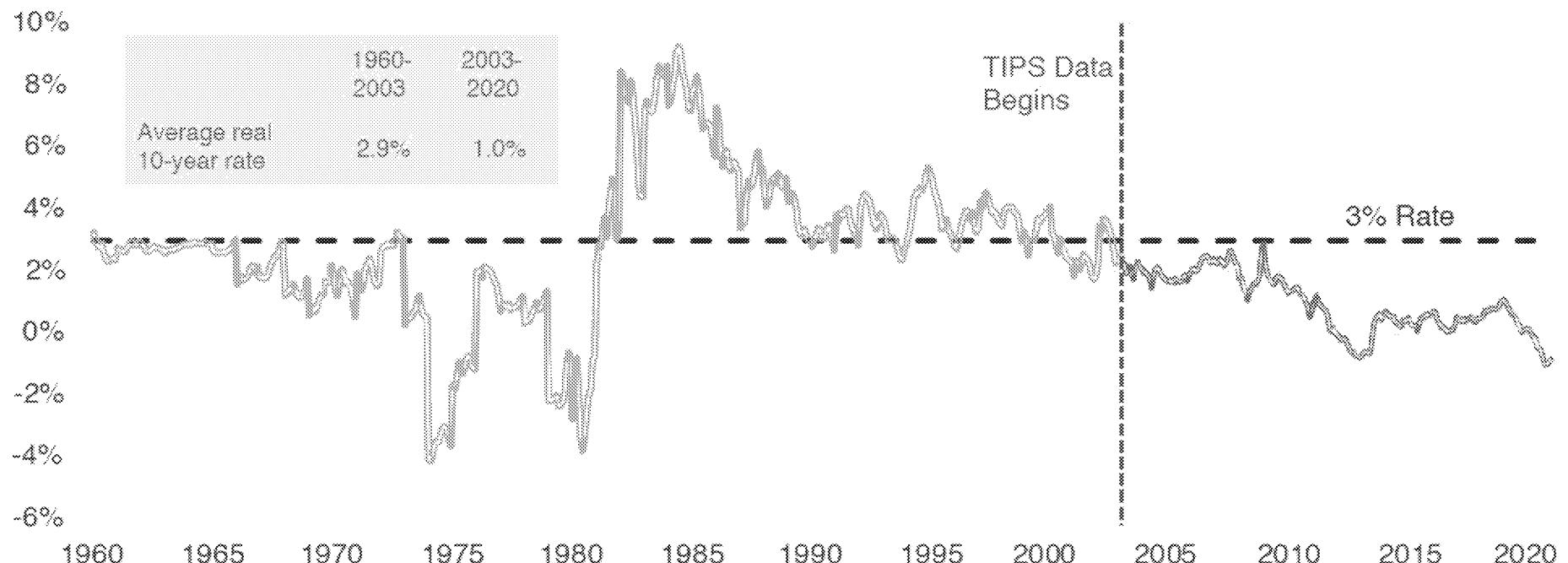
Damage
functions

Discounting

DISCOUNTING

Real interest rates have fallen substantially since 2009/2010

Monthly 10-year Treasury Security Interest Rates, Inflation-Adjusted



Source: Carleton & Greenstone (2021)

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Socioeconomic
and emission
projections

Climate system
representation

Damage
functions

Discounting

DISCOUNTING

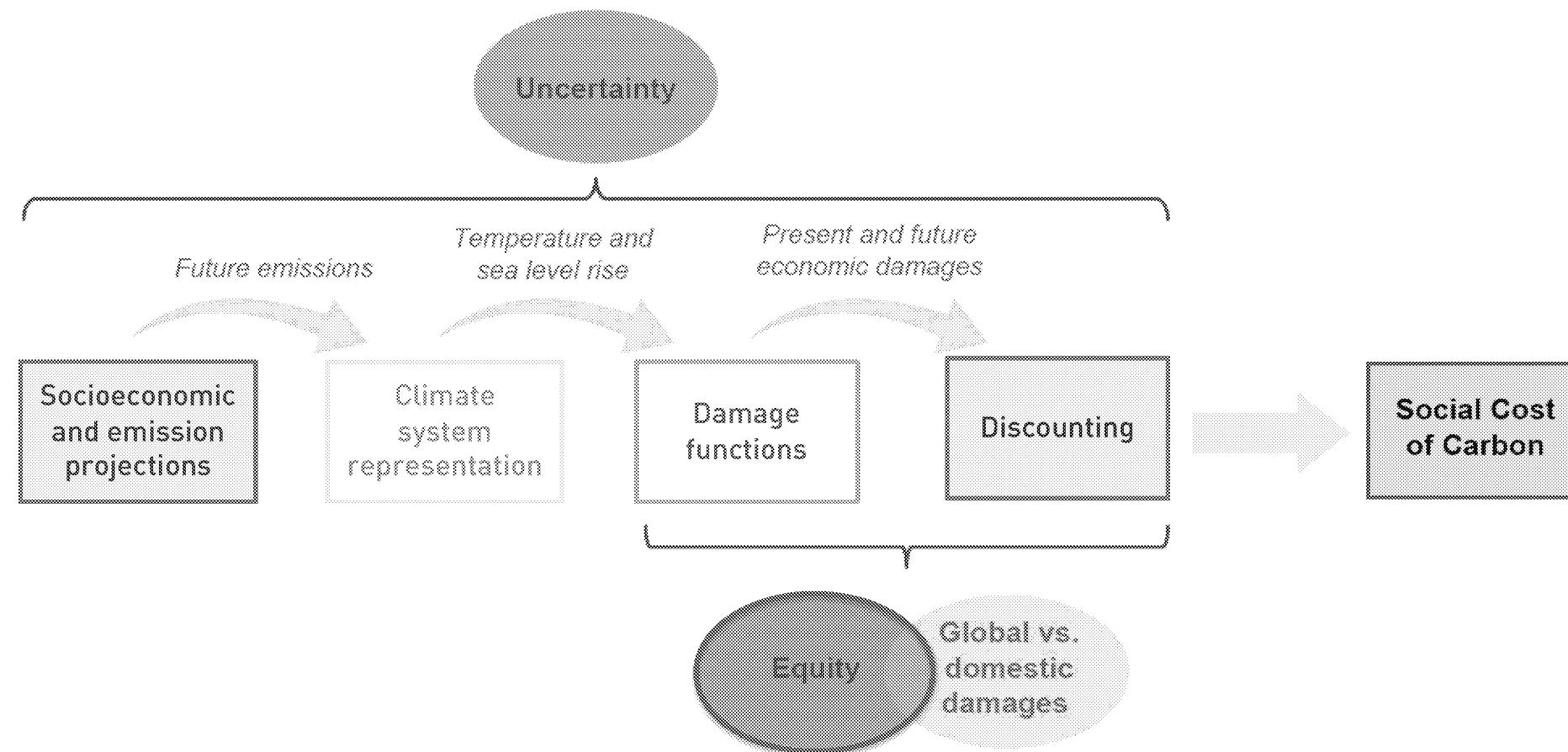
A large body of literature underscores the importance of:

1. Valuing multiple dimensions of uncertainty: e.g. Cai and Lontzek, 2016
2. Equity weighting of damages to reflect declining marginal utility of consumption: e.g., Anthoff, Hepburn, and Tol, 2009
3. Endogenous discounting based on economic growth and its uncertainty: e.g., Gollier and Weitzman, 2010

Climate Impact Lab research is uniquely positioned to empirically estimate SC-GHGs reflecting this literature:

- Heterogeneity across 24,378 regions
- Monte Carlo simulation capturing econometric, socioeconomic, and climatological uncertainty

Beyond improvements in the four key areas, the Climate Impact Lab's approach makes it possible to address equity.



EQUITY

Characterizing distributional impacts of climate change

High spatial resolution is required to address concerns of environmental justice

“The order initiates the development of a Climate and Environmental Justice Screening Tool, building off EPA’s EJSCREEN, to identify disadvantaged communities, support the Justice40 Initiative, and inform equitable decision making across the federal government”

-Fact Sheet on Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad, January 2021

“Agencies should consider appropriate data, indices, and screening tools to determine whether a specific community is disadvantaged based on a combination of variables that may include ... Disproportionate impacts from climate change” – OMB Interim Implementation Guidance for the Justice 40 Initiative, July 2021

Characterizing distributional impacts of climate change

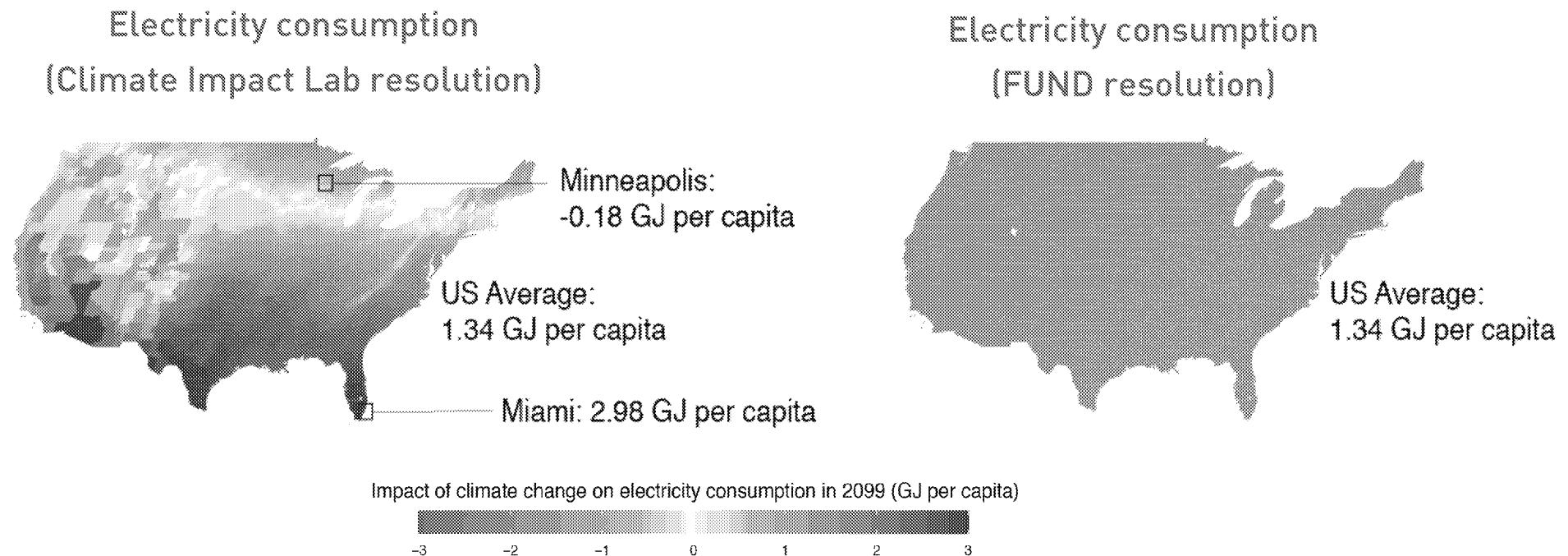
High spatial resolution is required to address concerns of environmental justice

- Resolving the disproportionate impacts of climate change on communities is only possible when localized, non-linear impacts can be measured and accounted for.
- IAMs treat all individuals and locations within a country/continent/planet identically and cannot distinguish unequal impacts.
 - *“The [PAGE & FUND] models clearly do not (and perhaps cannot) make reference to considerations of equity and justice in climate change management.” – Warren et al (2006)*
- ~25,000 regions in CIL each with unique impacts based on economic conditions and local climate.
- Allows valuation to consider for inherent challenges of achieving justice.

EQUITY

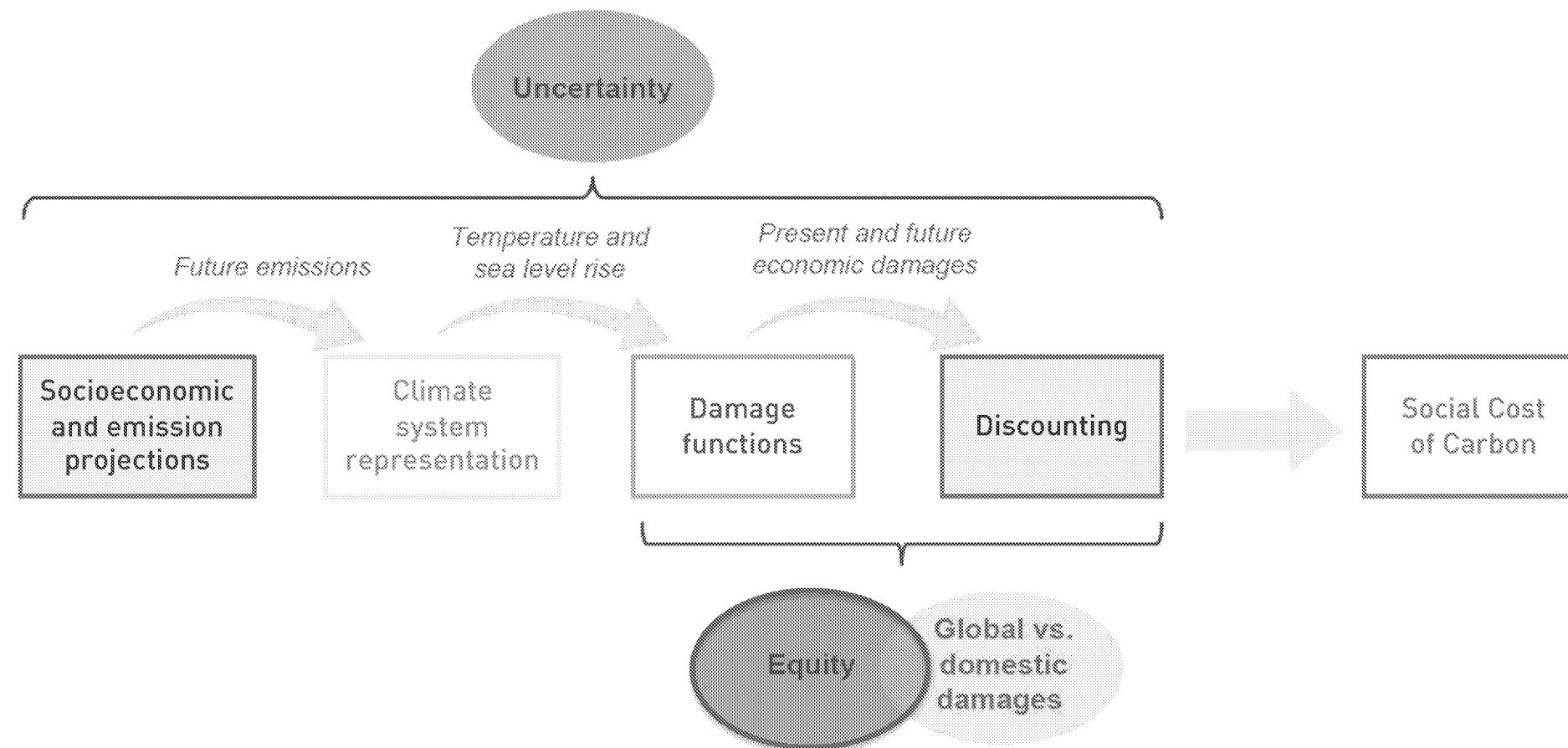
Characterizing distributional impacts of climate change

An example from the energy sector



Source: Climate Impact Lab 2021

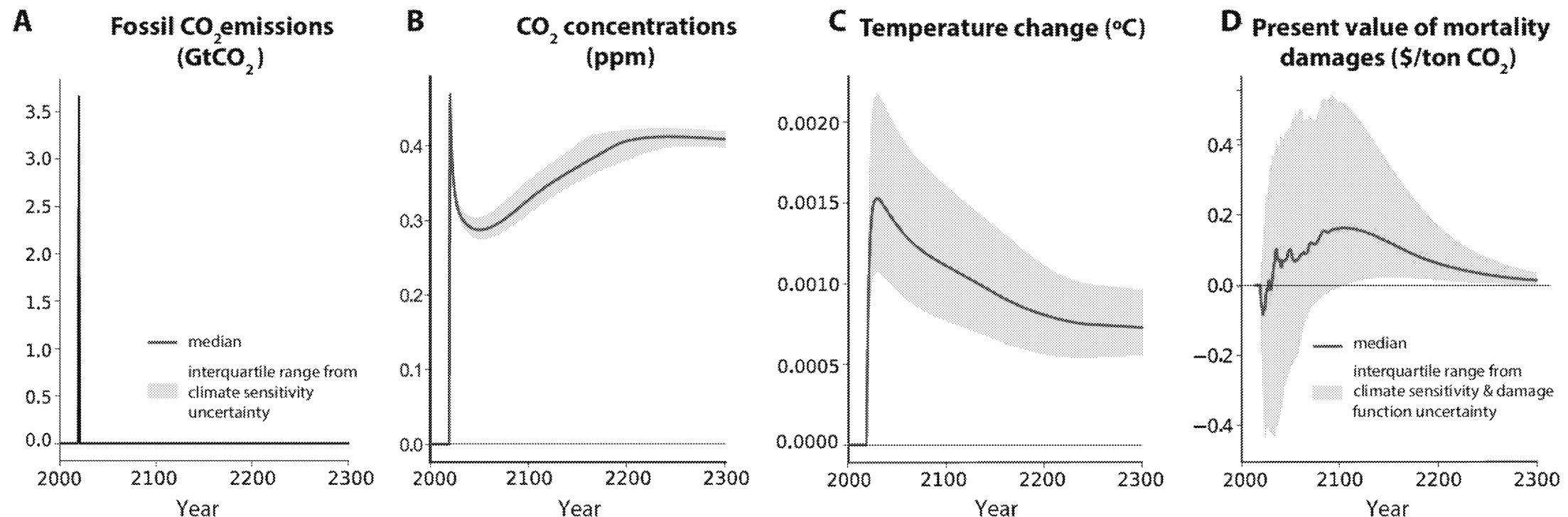
Summing Up: Climate Impact Lab's Results



SUMMING UP

Calculating a “partial SCC” for each impact category

We use the simple climate model Fair to sample all sensitivities and project global temperatures to 2300

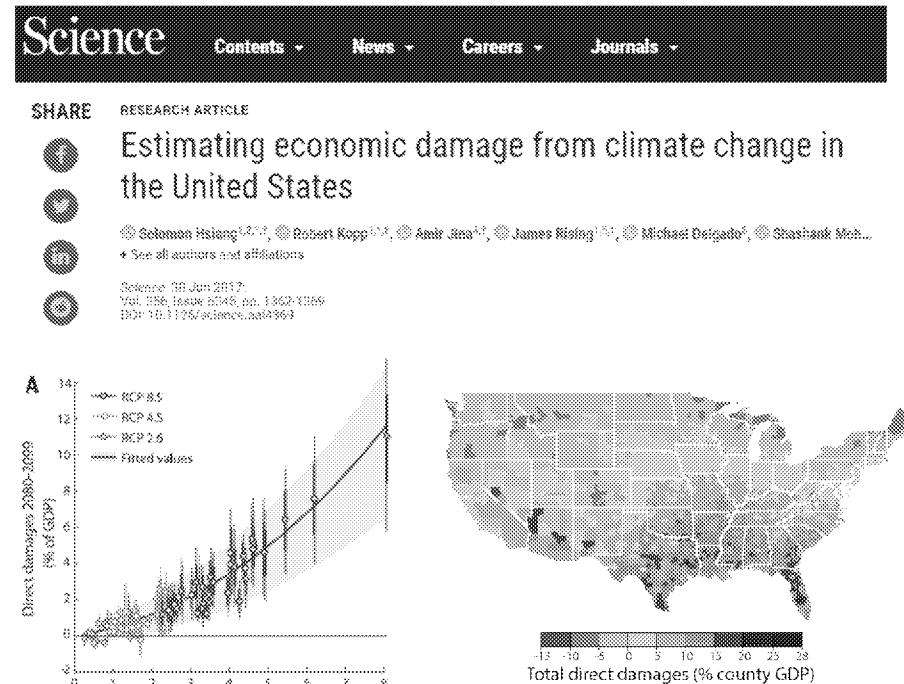


SUMMING UP

A strong, peer-reviewed foundation in top-tier science and econ journals

1

Initial US-based framework published in Science in 2017



2

Updated framework with global coverage and inclusive of adaptation forthcoming in *Nature*

Only the second research article on the SCC ever to be published in the journal. Establishes the full CIL SC-GHG methodology as applied to energy.

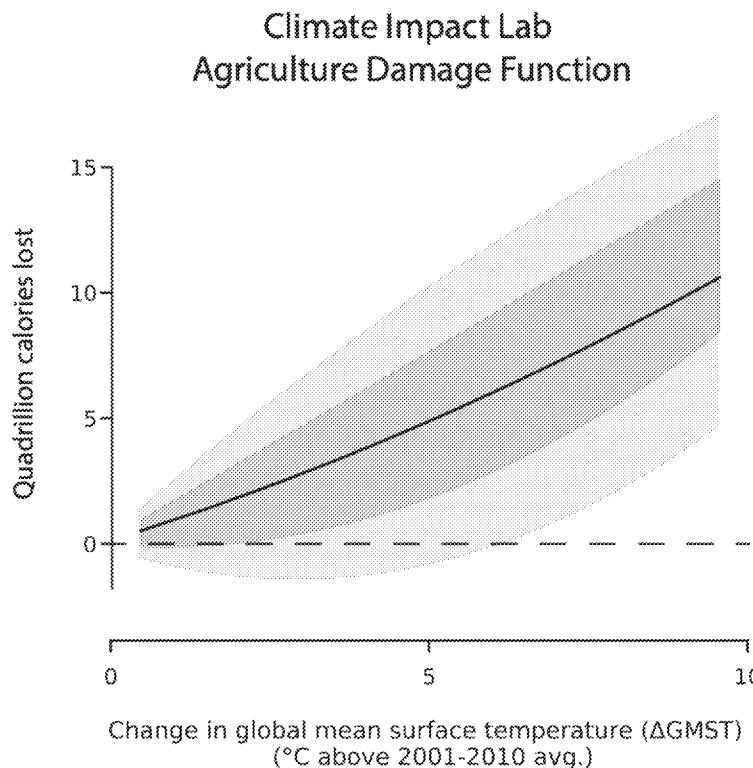
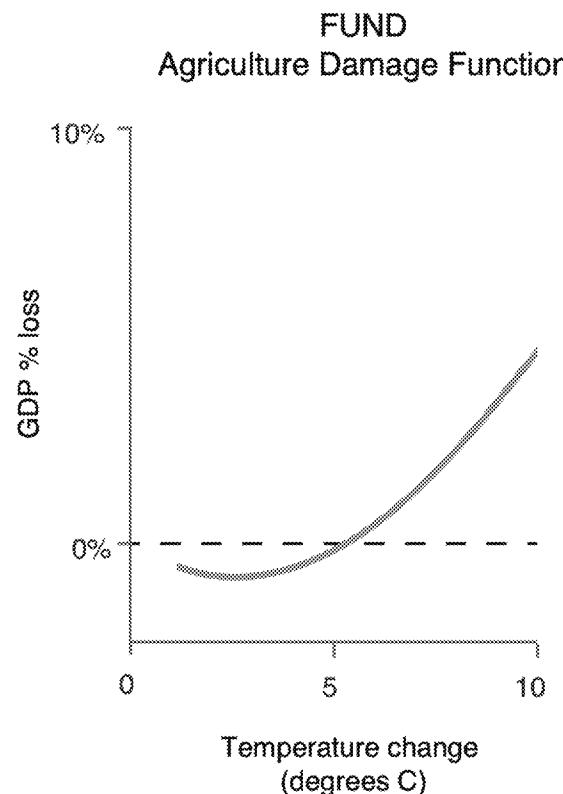
3

Updated framework with global coverage and inclusive of adaptation in review and resubmit with the *Quarterly Journal of Economics*

Will be the first article on any climate change topic ever published in the leading economics journal. Establishes the full CIL SC-GHG methodology as applied to mortality.

SUMMING UP

Why replacing the current IAMs is so important



FUND projects net global benefits until 2070.

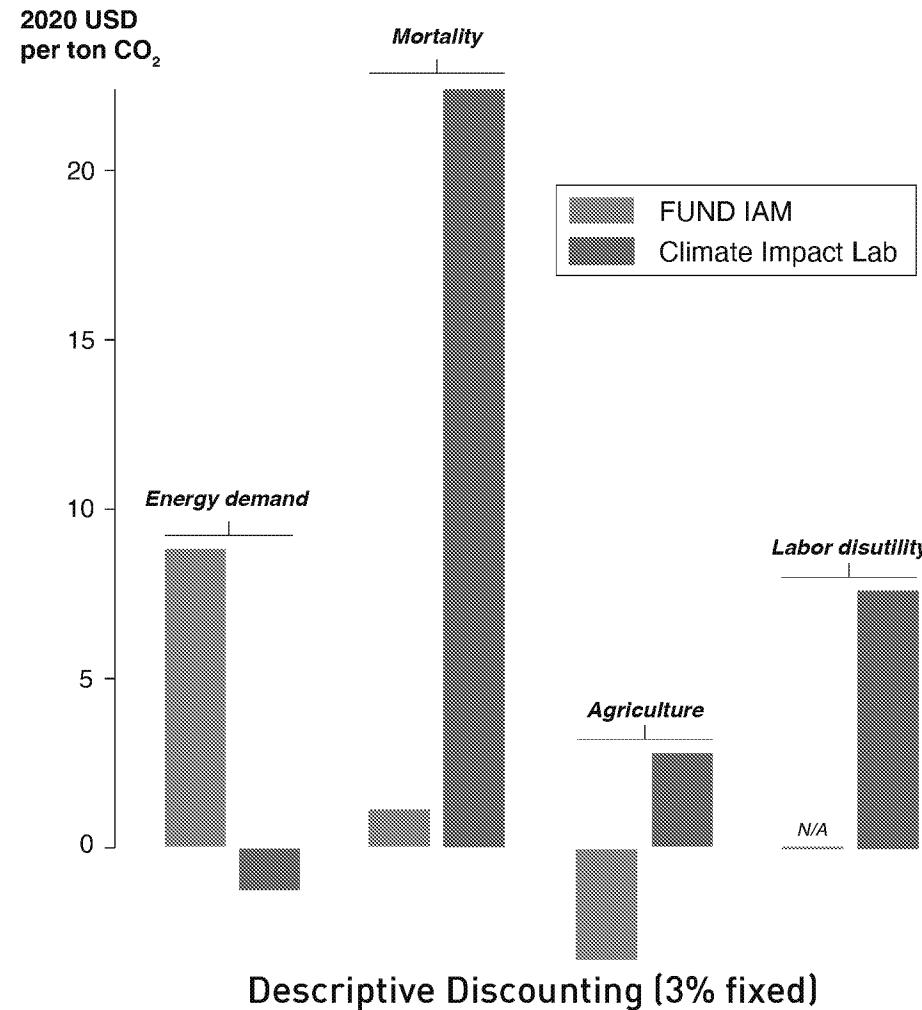
This is driven by net benefits in agriculture.

This occurs because the agriculture damage function indicates benefits below 5C warming

Empirical analysis suggests these benefits are not there.

SUMMING UP

Why replacing the current IAMs is so important



FUND not only gets the magnitude wrong when compared to empirically-calibrated SCCs, but the sign wrong in three of four instances

SUMMING UP

CIL SCC results

For Mortality, Energy, Labor sectors combined, for a pulse of CO₂ in 2020

Descriptive Discounting (2% fixed, SSP3)		Prescriptive Discounting (Ramsey)	
	Without Uncertainty	With Uncertainty*	With Uncertainty**
RCP 4.5	\$49	\$79	\$125
RCP 7.0	\$74	\$292	\$207

- CIL SC-GHG Tool to be released at the end of July gives users the ability to select a range of socioeconomic and emission scenarios and discount rate assumptions
- CIL SC-GHG Tool will include Agriculture and Coastal SCCs for a total of five sectors
- SCMs and SCNs will be added this fall

*Reflects uncertainty in climate and econometrics

**Reflects uncertainty in climate, econometrics, and growth across socioeconomic scenarios

SUMMING UP

An open-source system that can be updated as research expands

Preferred approach: platform integration

The ideal approach to updating SC-GHGs as new high quality climate economics research becomes available is to run those damage functions through the CIL's high-resolution impact projection and SC-GHG generation system. This maintains all the rich temporal and geographic heterogeneity in our approach and maximizes methodological consistency. The CIL's projection system will be an open-source platform for the research community with technical support provided by our team.

Alternative approach: sector addition

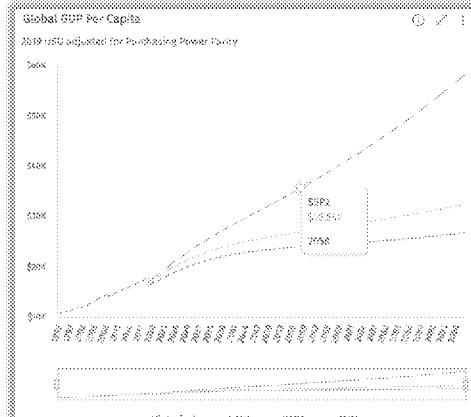
An alternative approach to including sectors not currently in CIL SC-GHGs is to estimate sector-specific SC-GHGs using existing IAMs with consistent socioeconomic and emission projections, a Fair climate module with consistent ECS parameters, and the same discounting procedure, and add them to CIL SC-GHGs. While there will still be some methodological inconsistencies with this approach, it is far less problematic than the Interim SC-GHG's averaging of IAMs with wildly different structures, climate modules and damage functions.

SUMMING UP

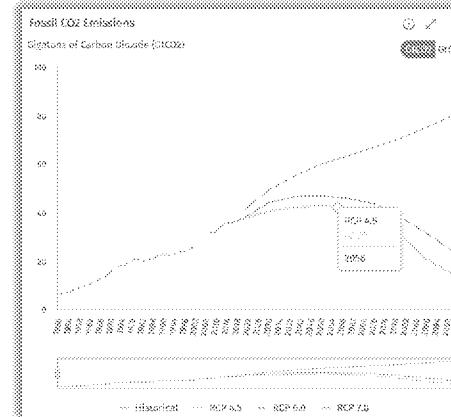
An open-source system that can be updated as research expands

CIL SC-GHG Tool allows users to assess both sector-specific and combined SCC results for a range of options

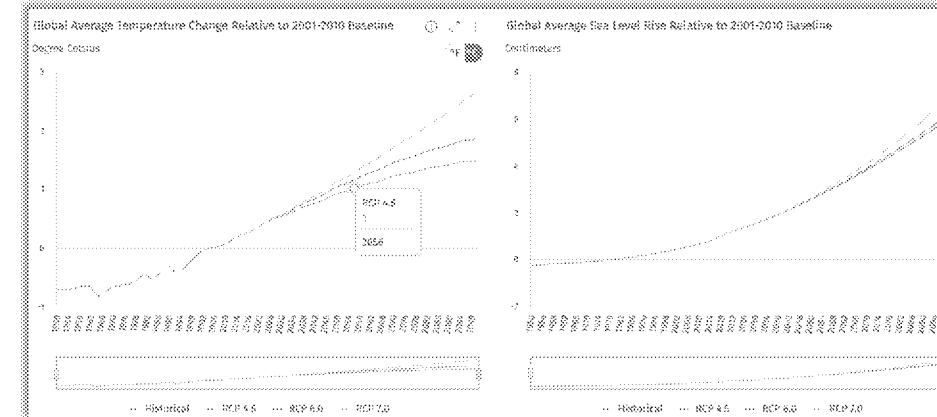
Socioeconomics



Emissions



Climate



Discounting

Discounting Option

Ramsey

Damages

- With Uncertainty
 Without Uncertainty

Social Cost of CO₂ 2020-2050 (in 2020 dollars per metric ton of CO₂)

Year	Social Cost of Carbon			
	Combined	Energy	Labor	Mortality
2020	\$177	\$-4	\$39	\$136

Emissions Scenario

Pathway

RCP 4.5
RCP 6.0
RCP 7.0

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 9/2/2021 2:46:48 PM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Geoff Blanford [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting
Start: 9/2/2021 5:00:00 PM
End: 9/2/2021 6:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Sep 2, 2021 10:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

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Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda:

1. Update on round #1 study design (Allen)
 2. Should we include contributions from study groups as appendices
 3. Update on data reporting template status (Jim)
 4. Managing requests for model output info and graphics desired from study groups
 5. Proposed schedule for next round (all)
 6. Probably good to have at least one meeting per month, but probably more?
4. Other urgent matters?

4.

5.

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 9/21/2021 4:32:20 AM
To: Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampis Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giordola [s.giordola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6]; Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6]; Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxen@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woolacott, Jared [woollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6]; Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [Ex. 6]; Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de];
CC: Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de]
Subject: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design
Start: 9/27/2021 4:00:00 PM
End: 9/27/2021 5:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design

Time: Sep 27, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 1/7/2021 2:38:16 PM
To: Geoff Blanford [gblanford@epri.com]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Kanudia, Amit [amit@kanors.com]; Marc Melaina [marc.melaina@ee.doe.gov]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Whitney Herndon [wjherndon@rhg.com]; Wright, Evelyn [Ex. 6] Charles Rossmann [cgrossma@southernco.com]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Shin, Dave [shind@api.org]; Steve Suryan [steve.suryan@chevron.com]; abarron@smith.edu; Ben Leibowicz [bleibowicz@utexas.edu]; Johnn Bistline [jbistline@epri.com]; Elke Hodson [vruijven@iiasa.ac.at]

Subject: EMF 37 Working Group Meeting #3

Start: 1/8/2021 5:00:00 PM

End: 1/8/2021 8:00:00 PM

Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #3

Time: Jan 8, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[Ex. 6]

Password: [Ex. 6]

Or iPhone one-tap (US Toll): [Ex. 6]

[Ex. 6]

Or Telephone:

Dial: [Ex. 6] (US, Canada, Caribbean Toll) or [Ex. 6] (US, Canada, Caribbean Toll Free)

Meeting ID: [Ex. 6]

Password: [Ex. 6]

International numbers available: [Ex. 6]

Meeting ID: [Ex. 6]

Password: [Ex. 6]

SIP: [Ex. 6]

Password: [Ex. 6]

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 2/9/2021 9:28:12 PM
To: Geoff Blanford [gblanford@epri.com]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Kanudia, Amit [amit@kanors.com]; Marc Melaina [marc.melaina@ee.doe.gov]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Whitney Herndon [wjherndon@rhg.com]; Wright, Evelyn [evelyn.l.wright@gmail.com]; Charles Rossmann [cgrossma@southernco.com]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Shin, Dave [shind@api.org]; Steve Suryan [steve.suryan@chevron.com]; abarron@smith.edu; Ben Leibowicz [bleibowicz@utexas.edu]; Johnn Bistline [jbistline@epri.com]; Elke Hodson [Elke.Hodson@epri.com]; Shelby, Michael [Shelby.Michael@epa.gov]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Turnure, James [James.Turnure@eia.gov]; Arent, Doug [Doug.Arent@nrel.gov]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Carla Frisch [cfrisch@rmi.org]; Grundler, Christopher [grundler.christopher@epa.gov]; Jose Benitez [jose.benitez@hq.doe.gov]; Tom Wilson [twilson@epri.com]

Ex. 6

Subject: EMF 37 Working Group Meeting #4
Attachments: Tentative Agenda-EMF 37 WG Mtg #4 as of 2-9-2021.docx

Start: 2/12/2021 5:00:00 PM
End: 2/12/2021 8:00:00 PM

Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #4
Time: Feb 12, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll): **Ex. 6**

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda
EMF 37 Working Group Meeting #4
(Organized by the Transport Study Group)
February 12, 2021
(as of February 9, 2021)

All Times: Eastern Std. Time

Intro – Steering Committee	SC	12:00-12:05
Intro <ul style="list-style-type: none"> • Objectives of this meeting • Why representing transportation matters for electrification and net-zero carbon 	Sharyn	12:05-12:15
Review Transport Model Questionnaire <ul style="list-style-type: none"> • What is the model, • what are we trying to do with the info/process • where are the gaps 	Matteo	12:15-12:30
Review transportation models/modules <ul style="list-style-type: none"> • GCAM, Marshall • Artemis, Jared • REGEN, Geoff Blanford • TEMPO, Matteo • NEMS, Frances (tentative) 		12:30-1:45
Break		1:45-1:55
Other input and perspectives <ul style="list-style-type: none"> • Geoff Morrison, state level deep decarbonization modeling • Noel, EV population analysis – GHG, air quality policy analysis 		1:40-2:10
Discussion <ul style="list-style-type: none"> • Approaches for transportation models to engage <ul style="list-style-type: none"> ◦ Direct linkages ◦ Soft linkages, bounding scenarios, calibration ◦ Exogenous adjustments (when technologies are missing, etc) ◦ Harmonization of inputs • Further engagement <ul style="list-style-type: none"> ◦ Join our group! 	Kara, Sharyn, Matteo	2:10-2:55
Wrap up		2:55-3:00

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 2/18/2021 12:25:51 AM
To: Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Blanford, Geoffrey [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting

Start: 2/22/2021 5:00:00 PM
End: 2/22/2021 6:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Feb 22, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[Ex. 6]

Password: [Ex. 6]

Or iPhone one-tap (US Toll): [Ex. 6]

[Ex. 6]

Or Telephone:

Dial: [Ex. 6] (US, Canada, Caribbean Toll) or [Ex. 6] (US, Canada, Caribbean Toll Free)

Meeting ID: [Ex. 6]

Password: [Ex. 6]

International numbers available [Ex. 6]

Meeting ID: [Ex. 6]

Password: [Ex. 6]

SIP: [Ex. 6]

Password: [Ex. 6]

Tentative Agenda

- (1) Encouraging More Teams to Submit Beta-Round Scenarios
- (2) Encouraging Study Groups to Develop Recommendations for Round #1
- (3) Structure of May Meeting Review Beta-round Results and Develop Round #1 scenarios

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 2/24/2021 2:38:31 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: Meeting Between EMF 37 Buildings Study Group and EMF 37 Steering Committee
Start: 2/26/2021 6:00:00 PM
End: 2/26/2021 7:00:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 3/3/2021 8:47:48 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Meeting Forward Notification: EMF 37 Working Group Meeting #5
Start: 3/3/2021 9:00:00 PM
End: 3/3/2021 9:30:00 PM
Show Time As: Busy

Your meeting was forwarded

Fawcett, Allen has forwarded your meeting request to additional people.

Meeting

EMF 37 Working Group Meeting #5

Meeting Time

Friday, March 12, 2021 12:00 PM - Friday, March 12, 2021 3:00 PM

Recipients

Creason, Jared

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 4/8/2021 9:39:37 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: REMINDER: EMF 37 Working Group Meeting #6
Start: 4/9/2021 4:00:00 PM
End: 4/9/2021 7:00:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c42c443c02834519bd99d9826afccf54-AFAWCETT]
Sent: 5/5/2021 3:21:04 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 5/5/2021 8:00:00 PM
End: 5/5/2021 9:00:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c42c443c02834519bd99d9826afccf54-AFAWCETT]
Sent: 5/18/2021 4:52:13 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 5/20/2021 5:00:00 PM
End: 5/20/2021 6:00:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 6/2/2021 1:18:52 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 6/4/2021 4:00:00 PM
End: 6/4/2021 5:00:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 7/9/2021 3:33:23 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Buildings Study group and Steering Committee Joint Meeting
Start: 7/13/2021 6:00:00 PM
End: 7/13/2021 7:00:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 7/20/2021 5:21:51 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 7/20/2021 5:00:00 PM
End: 7/20/2021 6:00:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 8/27/2021 8:33:08 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 9/2/2021 5:00:00 PM
End: 9/2/2021 6:00:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 1/5/2021 2:18:40 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Meeting Forward Notification: EMF 37 Working Group Meeting #3
Start: 1/5/2021 2:30:00 PM
End: 1/5/2021 3:00:00 PM
Show Time As: Busy

Your meeting was forwarded

Fawcett, Allen has forwarded your meeting request to additional people.

Meeting

EMF 37 Working Group Meeting #3

Meeting Time

Friday, January 08, 2021 12:00 PM - Friday, January 08, 2021 3:00 PM

Recipients

McFarland, James

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

Appointment

From: Fawcett, Allen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c42c443c02834519bd99d9826afccf54-AFAWCETT]
Sent: 9/15/2021 8:45:02 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design
Start: 9/27/2021 4:00:00 PM
End: 9/27/2021 5:00:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 9/21/2021 11:10:39 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 9/23/2021 6:30:00 PM
End: 9/23/2021 7:30:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 1/22/2021 7:40:04 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting with Transport Study Group Leaders
Start: 2/1/2021 5:00:00 PM
End: 2/1/2021 5:30:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 1/25/2021 10:34:42 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting with Transport Study Group Leaders
Start: 2/1/2021 5:00:00 PM
End: 2/1/2021 6:00:00 PM
Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 2/18/2021 2:48:55 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting

Start: 2/22/2021 5:00:00 PM
End: 2/22/2021 6:00:00 PM
Show Time As: Busy

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 2/1/2021 12:06:21 AM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: Allen Fawcett

Start: 2/1/2021 9:00:00 PM
End: 2/1/2021 9:30:00 PM

Recurrence: (none)

Appointment

From: Fawcett, Allen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C42C443C02834519BD99D9826AFCCF54-AFAWCETT]
Sent: 2/18/2021 12:25:52 AM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Steering Committee Meeting
Start: 2/22/2021 5:00:00 PM
End: 2/22/2021 5:30:00 PM

Recurrence: (none)

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/5/2021 3:08:03 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Geoff Blanford [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting
Start: 5/5/2021 8:00:00 PM
End: 5/5/2021 9:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: May 5, 2021 01:00 PM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

Or iPhone one-tap (US Toll): [redacted]

Ex. 6

Or Telephone:

Dial: [redacted] **Ex. 6** (US, Canada, Caribbean Toll) or [redacted] **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

International numbers available: [redacted] **Ex. 6**

Meeting ID: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

SIP: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

Agenda for 5-5-2021 SC Call

(1) Agenda for May 14th Meeting

- Study Groups-Ideas for Round #1 (15 minutes each)
- Discussion
- Short Break
- System Modelers-Ideas for Round #1 (5 minutes each)
- Short Break
- Discussion of Way Forward, inc. June 11th Beta Round Results Meeting
- Progress on Round #1 Submissions

ED_014112B_00000518-00002

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/15/2021 6:11:50 PM
To: John P Weyant [weyant@stanford.edu]; Geoff Blanford [gblanford@epri.com]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: EMF 37 Steering Committee Meeting
Start: 5/20/2021 5:00:00 PM
End: 5/20/2021 6:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: May 19, 2021 10:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[Ex. 6]

Password: [Ex. 6]

Or iPhone one-tap (US Toll): [Ex. 6]

[Ex. 6]

Or Telephone:

Dial: [Ex. 6] (US, Canada, Caribbean Toll) or [Ex. 6] (US, Canada, Caribbean Toll Free)

Meeting ID: [Ex. 6]

Password: [Ex. 6]

International numbers available: [Ex. 6]

Meeting ID: [Ex. 6]

Password: [Ex. 6]

SIP: [Ex. 6]

Password: [Ex. 6]

Tentative Agenda

- (1) Update on Beta Round results reporting (Jim)
- (2) Ideas for encouraging more Beta Round reporting (All)
- (3) Ideas for Round #1 Straw Person Scenario/Study design (All)
- (4) Early ideas for WG Meeting #8 Agenda (All)
- (5) EM staff adjustments to handle increased work flow (John)

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 6/2/2021 1:15:10 PM
To: John P Weyant [weyant@stanford.edu]; Geoff Blanford [gblanford@epri.com]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]
Subject: EMF 37 Steering Committee Meeting
Start: 6/4/2021 4:00:00 PM
End: 6/4/2021 5:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Jun 4, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda

- (1) Update on Beta round submissions (Jim)- 5 minutes
- (2) Reflections on Meetings with Study Groups (All)-10 minutes
- (3) Structure of June 11th WG Meeting (Allen and All) - 20 minutes
- (4) Tasks to complete before June 11th (John and All) - 10 minutes
- (5) Tentative schedule through end of 2021 and beyond (All) - 10 minutes

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 6/14/2021 5:13:34 PM
To: John P Weyant [weyant@stanford.edu]; Geoff Blanford [gblanford@epri.com]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: EMF 37 Steering Committee Meeting
Start: 6/16/2021 6:00:00 PM
End: 6/16/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Jun 16, 2021 11:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available

Ex. 6

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda

- (1) Reflections on last week's working group meeting
- (2) Organizing for developing Round #1 Scenarios (matrix plus design document)
 - Degree of reliance on direct requests to study groups vs SC+others
 - Form and timing of interactions with study groups
 - Review process before pulling giving the go ahead to run
- (3) Process for the fall and after
 - Request for results desired for final reports and to stimulate new cross-cut paper proposals
 - Publication options
 - Possible intermediate formal and informal products

ED_014112B_00000528-00002

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 1/22/2021 7:39:29 PM
To: John P Weyant [weyant@stanford.edu]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Blanford, Geoffrey [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting with Transport Study Group Leaders
Start: 2/1/2021 5:00:00 PM
End: 2/1/2021 6:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting with Transport Study Group Leaders
Time: Feb 1, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available

Ex. 6

Meeting ID **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 7/20/2021 5:02:46 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Geoff Blanford [gblanford@epri.com]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]
Subject: EMF 37 Steering Committee Meeting
Start: 7/20/2021 5:00:00 PM
End: 7/20/2021 6:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Jul 20, 2021 10:00 AM Pacific Time (US and Canada)

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Or iPhone one-tap (US Toll):

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Meeting ID: Ex. 6

Password: Ex. 6

International numbers available: Ex. 6

Meeting ID: Ex. 6

Password: Ex. 6

SIP: Ex. 6

Password: Ex. 6

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 7/9/2021 2:46:20 PM
To: John P Weyant [weyant@stanford.edu]; Wilson, Eric [Eric.Wilson@nrel.gov]; Parker, Andrew [Andrew.Parker@nrel.gov]; Geoff Blanford [gblanford@epri.com]; Sandoval, Noah [Noah.Sandoval@nrel.gov]; Janet Reyna [janet.reyna@nrel.gov]; Daniel Steinberg [daniel.steinberg@nrel.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Delforge, Pierre [pdelforge@nrdc.org]; Aaron Pardy [apardy@sfu.ca]; McFarland, James [McFarland.James@epa.gov]; Elaine Hale [elaine.hale@nrel.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; Chioke Harris [chioke.harris@nrel.gov]
Subject: EMF 37 Buildings Study group and Steering Committee Joint Meeting
Start: 7/13/2021 6:00:00 PM
End: 7/13/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: Joint Meeting Between the EMF 37 Buildings Study Group and EMF 37 Steering Committee
Time: Jul 13, 2021 11:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Password: **Ex. 6**

Or iPhone one-tap (US Toll):

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Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available:

Ex. 6

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/6/2021 11:09:45 AM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6]; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6]; caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6]; Hernandez, Rachel C. EOP/OMB [Ex. 6]; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP [Ex. 6]; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Solomon Hsiang [shsiang@berkeley.edu]; Hannah Hess [hhess@rhg.com]; Trevor Houser [tghouser@rhg.com]; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6]; Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]; Peters, Erik B. EOP/OMB (Intern) [Ex. 6]; kmccusker@rhg.com; inath33 [Ex. 6]

CC:

Subject: SC-GHG: Presentation #2 from Climate Impact Lab
Location: [Ex. 6]

Start: 7/29/2021 5:00:00 PM
End: 7/29/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Solomon Hsiang; Hannah Hess; Trevor Houser

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp; Peters, Erik B. EOP/OMB (Intern); kmccusker@rhg.com; inath33 [Ex. 6]

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their integration tool).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US:
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Meeting
URL:
Meeting ID:
Passcode:

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US:
Meeting
ID:
Passcode:

International numbers

Join from an H.323/SIP room system

H.323: (US West)
 (US East)
Meeting
ID:
Passcode:
SIP:
Passcode:

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 7/28/2021 2:08:03 PM
To: John P Weyant [weyant@stanford.edu]; Elaine Hale [elaine.hale@nrel.gov]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Geoff Blanford [gblanford@epri.com]
Subject: Meeting Between Elaine Hale and Kevin Jarzomski, and the EMF 37 Steering Committee
Start: 8/2/2021 6:00:00 PM
End: 8/2/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: Meeting Between Elaine Hale and Kevin Jarzomski, and the EMF 37 Steering Committee
Time: Aug 2, 2021 11:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

Or iPhone one-tap (US Toll): [redacted]

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Or Telephone:

Dial: [redacted] **Ex. 6** (US, Canada, Caribbean Toll) or [redacted] **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

International numbers available [redacted] **Ex. 6**

Meeting ID: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

SIP: [redacted] **Ex. 6**

Password: [redacted] **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 1/31/2021 9:36:26 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]

Subject: Allen Fawcett

Start: 2/1/2021 9:00:00 PM
End: 2/1/2021 9:30:00 PM
Show Time As: Busy

Recurrence: (none)

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 8/27/2021 8:28:18 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Geoff Blanford [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting

Start: 9/2/2021 5:00:00 PM
End: 9/2/2021 6:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Sep 2, 2021 10:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda:

1. Update on round #1 study design (Allen)
 2. Should we include contributions from study groups as appendices
 3. Update on data reporting template status (Jim)
 4. Managing requests for model output info and graphics desired from study groups
 5. Proposed schedule for next round (all)
 6. Probably good to have at least one meeting per month, but probably more?
4. Other urgent matters?

4.

5.

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 9/21/2021 11:02:41 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Geoff Blanford [gblanford@epri.com]

Subject: EMF 37 Steering Committee Meeting

Start: 9/23/2021 6:30:00 PM
End: 9/23/2021 7:30:00 PM

Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting

Time: Sep 23, 2021 11:30 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Password: **Ex. 6**

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Meeting ID: **Ex. 6**

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International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 9/15/2021 8:42:10 PM
To: John P Weyant [weyant@stanford.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giarola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceaindustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solanç [Ex. 6] Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxen@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [Ex. 6] Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonard.goeke@tu-berlin.de]

CC:

Subject: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design

Start: 9/27/2021 4:00:00 PM
End: 9/27/2021 5:00:00 PM

Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design

Time: Sep 27, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Meeting ID: Ex. 6

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Meeting ID: Ex. 6

Password: Ex. 6

SIP: Ex. 6

Password: Ex. 6

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 2/18/2021 12:25:35 AM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Blanford, Geoffrey [gblanford@epri.com]
Subject: EMF 37 Steering Committee Meeting

Start: 2/22/2021 5:00:00 PM
End: 2/22/2021 6:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Feb 22, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Meeting ID: **Ex. 6**

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International numbers available

Ex. 6

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda

- (1) Encouraging More Teams to Submit Beta-Round Scenarios
- (2) Encouraging Study Groups to Develop Recommendations for Round #1
- (3) Structure of May Meeting Review Beta-round Results and Develop Round #1 scenarios

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 2/24/2021 2:33:23 PM
To: John P Weyant [weyant@stanford.edu]; Elaine Hale [elaine.hale@nrel.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Delforge, Pierre [pdelforge@nrdc.org]; Chioke Harris [chioke.harris@nrel.gov]; Sandoval, Noah [Noah.Sandoval@nrel.gov]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; Jared Langevin [jared.langevin@lbl.gov]; Janet Reyna [janet.reyna@nrel.gov]; Geoff Blanford [gblanford@epri.com]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]
Subject: Meeting Between EMF 37 Buildings Study Group and EMF 37 Steering Committee
Start: 2/26/2021 6:00:00 PM
End: 2/26/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: Meeting Between EMF 37 Buildings Study Group and EMF 37 Steering Committee
Time: Feb 26, 2021 10:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Password: **Ex. 6**

Or iPhone one-tap (US Toll):

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Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 10/4/2021 2:26:55 AM
To: John P Weyant [weyant@stanford.edu]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giordola [s.giordola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Saulех Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solanc [Ex. 6] Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxon [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [Ex. 6] Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de]; Perl, Kelly [Kelly.Perl@eia.gov]; Friedman, David T. [David.Friedman@eia.gov]; Mark Jaccard [mark_jaccard@sfsu.ca]; Binsted, Matthew T [matthew.binsted@pnnl.gov]; Cunliff, Colin [colin.cunliff@hq.doe.gov]; Aditya Sinha [asinha2@ncsu.edu]; Emma Starke [emma_starke@sfsu.ca]; abarron@smith.edu; Becker, Jon [Jon.Becker@nrel.gov]; Marie Pied [marie@esmia.ca]

CC:

Subject: EMF 37 Working Group meeting on clarifying round 1 scenario implementation and assumptions

Start: 11/19/2021 5:00:00 PM

End: 11/19/2021 8:00:00 PM

Show Time As: Busy

Recurrence: (none)

Topic: EMF 37 Working Group Meeting

Time: Nov 19, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 4/15/2021 1:22:20 PM
To: John P Weyant [weyant@stanford.edu]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Geoff Blanford [gblanford@epri.com]; Trieu Mai [trieu.mai@nrel.gov]; McFarland, James [McFarland.James@epa.gov]
Subject: EMF 37 Steering Committee Meeting

Start: 4/15/2021 4:00:00 PM
End: 4/15/2021 5:00:00 PM
Show Time As: Busy

-----Original Appointment-----

From: John P Weyant <weyant@stanford.edu>
Sent: Monday, April 12, 2021 6:30 PM
To: John P Weyant; Geoff Blanford; Trieu Mai; McFarland, James
Subject: EMF 37 Steering Committee Meeting
When: Thursday, April 15, 2021 9:00 AM-10:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where:

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Steering Committee Meeting
Time: Apr 15, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available:

Ex. 6

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Tentative Agenda

- (1) Review/update on overall goals for the study (10 minutes)
- (1) Goals for process of going from Beta Round to Round #1 (10 minutes)

(2) Timing (Start/Spacing) and Number of Sessions(30 minutes)

- 1-2 sessions?
- 3 Sessions could be - Beta Round Review, Reactions to Beta Round, Round #1 Design
- Other

(3) Who else do we need to engage before we are finished and how to keep current groups engaged. (10 minutes)

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/6/2021 11:04:06 AM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Ex. 6] ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6] Fenichel, Eli P. EOP/OSTP [Ex. 6] michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]; Butry, David T. (Fed) [david.butry@nist.gov] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]

CC:

Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: [Ex. 6]

Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US:
mobile:
Meeting
URL:
Meeting ID:
Passcode:

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US:
Meeting
ID:
Passcode

International numbers

Join from an H.323/SIP room system

H.323: (US West)
 (US East)
Meeting
ID:
Passcode
SIP:
Passcode

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 1/7/2021 11:47:20 PM
To: +1703307^{Ex. 6}; Application 207a6836-d031-4764-a9d8-c1193f455f21; Marten, Alex [Marten.Alex@epa.gov]; Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e; Prest, Brian [prest@rff.org]; Billy Pizer [billy.pizer@duke.edu]; Newell, Richard [Newell@rff.org]; Rennert, Kevin [rennert@rff.org]; Wolverton, Ann [Wolverton.Ann@epa.gov]
Subject: Meeting (ScheduledMeeting)/Thread Id: 19:meeting_MzFkOWI3NDktY2Q5ZC00NmRmLWFhZmQtNzQ1ZTE4ODk3NGFk@thread.v2/Communication Id: 706ebd41-63cf-45c4-8d76-c4b668594eb1/+1703307^{Ex. 6}; Marten, Alex; Kopits, Elizabeth; Tan, Tammy; McGartland, Al; Parthum, Bryan; Griff...

Start: 1/7/2021 3:27:56 PM
End: 1/7/2021 4:47:20 PM
Show Time As: Busy

Recurrence: (none)

Required +1703307^{Ex. 6}; Application 207a6836-d031-4764-a9d8-c1193f455f21; Marten, Alex; Kopits, Elizabeth; Tan, Tammy;
Attendees: McGartland, Al; Parthum, Bryan; Griffiths, Charles; Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e; Prest, Brian; Billy Pizer; Newell, Richard; Rennert, Kevin; Wolverton, Ann

Start Time (UTC): 1/7/2021 3:27:56 PM

End Time (UTC): 1/7/2021 4:47:20 PM

Duration: 01:19:24.2472829

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[1/7/2021 3:32:04 PM (UTC)] Marten.Alex@epa.gov joined.
[1/7/2021 4:33:36 PM (UTC)] Marten.Alex@epa.gov left.
[1/7/2021 3:30:29 PM (UTC)] Kopits.Elizabeth@epa.gov joined.
[1/7/2021 4:47:16 PM (UTC)] Kopits.Elizabeth@epa.gov left.
[1/7/2021 3:31:15 PM (UTC)] Tan.Tammy@epa.gov joined.
[1/7/2021 4:47:17 PM (UTC)] Tan.Tammy@epa.gov left.
[1/7/2021 3:27:56 PM (UTC)] McGartland.Al@epa.gov joined.
[1/7/2021 4:47:18 PM (UTC)] McGartland.Al@epa.gov left.
[1/7/2021 3:30:35 PM (UTC)] Parthum.Bryan@epa.gov joined.
[1/7/2021 4:47:18 PM (UTC)] Parthum.Bryan@epa.gov left.
[1/7/2021 3:29:23 PM (UTC)] Griffiths.Charles@epa.gov joined.
[1/7/2021 4:47:18 PM (UTC)] Griffiths.Charles@epa.gov left.
[1/7/2021 3:32:17 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e joined.
[1/7/2021 4:47:20 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e left.
[1/7/2021 3:28:00 PM (UTC)] prest@rff.org joined.
[1/7/2021 4:47:20 PM (UTC)] prest@rff.org left.
[1/7/2021 3:32:19 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e joined.
[1/7/2021 4:47:20 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e left.
[1/7/2021 3:30:04 PM (UTC)] billy.pizer@duke.edu joined.
[1/7/2021 4:31:13 PM (UTC)] billy.pizer@duke.edu left.
[1/7/2021 3:30:47 PM (UTC)] Newell@rff.org joined.
[1/7/2021 4:30:54 PM (UTC)] Newell@rff.org left.
[1/7/2021 3:30:47 PM (UTC)] rennert@rff.org joined.
[1/7/2021 4:30:58 PM (UTC)] rennert@rff.org left.
[1/7/2021 3:34:34 PM (UTC)] Wolverton.Ann@epa.gov joined.
[1/7/2021 4:29:45 PM (UTC)] Wolverton.Ann@epa.gov left.
[1/7/2021 3:31:31 PM (UTC)] +1703307^{Ex. 6} joined.
[1/7/2021 4:29:35 PM (UTC)] +1703307^{Ex. 6} left.
[1/7/2021 3:32:19 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e joined.
[1/7/2021 4:29:36 PM (UTC)] Application 9e133cac-5238-4d1e-aaa0-d8ff4ca23f4e left.

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 4/2/2021 2:48:53 PM
To: John P Weyant [weyant@stanford.edu]; Christopher Bataille [chris.bataille@iddri.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; Gale Boyd [gale.boyd@duke.edu]; Kelly Perl [eia-oeceaindustrialteam@eia.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; Jared Langevin [jared.langevin@lbl.gov]; Elaine Hale [elaine.hale@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Bryson, Joe [Bryson.Joe@epa.gov]; Delforge, Pierre [pdelforge@nrdc.org]; Chioke Harris [chioke.harris@nrel.gov]; Janet Reyna [janet.reyna@nrel.gov]; Aaron Pardy [apardy@sfsu.ca]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; geoffrey.morrison@cadmusgroup.com; Maples, John [john.maples@eia.gov]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Mary Zimmerman [mary.zimmerman@dot.gov]; Matteo Muratori [matteo.muratori@nrel.gov]; Edmonds, Jae [jae@pnnl.gov]; Wise, Marshall A [marshall.wise@pnnl.gov]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Lenox, Carol [Lenox.Carol@epa.gov]; Browning, Morgan [browning.morgan@epa.gov]; danielle.koren@hq.doe.gov; Frances Wood [fwood@onlocationinc.com]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Sharon Showalter [sshowalter@onlocationinc.com]; Sha Yu [sha.yu@pnnl.gov]; Johnson, Nils A. [njohnson@epri.com]; Alejandro Sarmiento [ASarmiento@diw.de]; Marten, Alex [Marten.Alex@epa.gov]; amber@ethree.com; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Baltazar Solano [Ex. 6] Brown, Maxwell [Maxwell.Brown@nrel.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Cohen, Stuart [stuart.cohen@nrel.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Dan Shawhan [shawhan@rff.org]; Geoff Blanford [gblanford@epri.com]; Giovanni Hernandez [Ex. 6] Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Hafstead, Mark [hafstead@rff.org]; Lalani, Imran [Lalani.Imran@epa.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jeff Amlin [jeffamlin@energy2020.com]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Joe Decarolis [jfdecaro@ncsu.edu]; Jotham Peters [jotham@naviusresearch.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; Nick Macaluso [nick.macaluso@canada.ca]; Mai, Trieu [Trieu.Mai@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Mei Yuan [yuanmei@mit.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Adele Morris [amorris@brookings.edu]; Olivier Bahn [olivier.bahn@gerad.ca]; Palmer, Karen [palmer@rff.org]; Peter Wilcoxon [wilcoxon@syr.edu]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Ross, Martin [martin.ross@duke.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Sarah Giorola [s.giorola10@imperial.ac.uk]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sharad Bharadwaj [sharad@ethree.com]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; Woollacott, Jared [jwoollacott@rti.org]; Wright, Evelyn [Ex. 6] Dylan Manning [dylan.manning@campus.tu-berlin.de]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Elke Hodson [Ex. 6] Shin, Dave [shind@api.org]; Steve Suryan [steve.suryan@chevron.com]; Shelby, Michael [Shelby.Michael@epa.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bistline, John [jbistline@epri.com]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Ron.Gecan@cbo.gov; Charles Rossmann [cgrossma@southernco.com]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Amit Kanudia [amit@kanors.com]; Whitney Herndon [wjherndon@rhg.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Marc Melaina [marc.melaina@ee.doe.gov]
CC: Tom Wilson [twilson@epri.com]; Carla Frisch [cfrisch@rmi.org]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Arent, Doug [Doug.Arent@nrel.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Jose Benitez [jose.benitez@hq.doe.gov]; Turnure, James [James.Turnure@eia.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]
Subject: REMINDER: EMF 37 Working Group Meeting #6
Start: 4/9/2021 4:00:00 PM
End: 4/9/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

Subject: REMINDER: EMF 37 Working Group Meeting #6

When: Friday, April 9, 2021 9:00 AM-12:00 PM.

Where:

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 11/17/2021 5:24:11 AM
To: John P Weyant [weyant@stanford.edu]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giordola [s.giordola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxon [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [Ex. 6]
CC: Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de]; Perl, Kelly [Kelly.Perl@eia.gov]; Friedman, David T. [David.Friedman@eia.gov]; Mark Jaccard [mark_jaccard@sfsu.ca]; Binsted, Matthew T [matthew.binsted@pnnl.gov]; Cunliff, Colin [colin.cunliff@hq.doe.gov]; Aditya Sinha [asinha2@ncsu.edu]; Emma Starke [emma_starke@sfsu.ca]; abarron@smith.edu; Becker, Jon [Jon.Becker@nrel.gov]; Marie Pied [marie@esmia.ca]
Subject: EMF 37 Working Group meeting on clarifying round 1 scenario implementation and assumptions

Start: 11/19/2021 5:00:00 PM

End: 11/19/2021 8:00:00 PM

Show Time As: Tentative

Recurrence: (none)

Topic: EMF 37 Working Group Meeting

Time: Nov 19, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: Grundler, Christopher [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D3BE58C2CC8545D88CF74F3896D4460F-GRUNDLER, CHRISTOPHER]
Sent: 1/8/2021 3:52:18 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Tentative: EMF 37 Working Group Meeting #5
Start: 3/12/2021 5:00:00 PM
End: 3/12/2021 8:00:00 PM

Recurrence: (none)

Appointment

From: Grundler, Christopher [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D3BE58C2CC8545D88CF74F3896D4460F-GRUNDLER, CHRISTOPHER]
Sent: 1/8/2021 3:52:20 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Tentative: EMF 37 Working Group Meeting #4
Start: 2/12/2021 5:00:00 PM
End: 2/12/2021 8:00:00 PM

Recurrence: (none)

Appointment

From: Martinich, Jeremy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4042067053EB4FEAB35127A0B65E517B-JMARTINI]
Sent: 2/19/2021 5:51:49 PM
To: Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Hannah Hess [hhess@rhg.com]
CC: Rona Birnbaum [Birnbaum.Rona@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]
Subject: Climate Impacts Coordination Discussion
Location: Microsoft Teams Meeting

Start: 3/3/2021 7:00:00 PM
End: 3/3/2021 8:00:00 PM
Show Time As: Busy

Required Martinich, Jeremy; Sarofim, Marcus; Hartin, Corinne; Hannah Hess
Attendees:
Optional Rona Birnbaum; Robert Kopp
Attendees:

Microsoft Teams meeting

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Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/6/2021 11:04:06 AM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6]; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6]; caspurlock [CASpurllock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6]; Hernandez, Rachel C. EOP/OMB [Ex. 6]; Fenichel, Eli P. EOP/OSTP [Ex. 6]; michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]; Butry, David T. (Fed) [david.butry@nist.gov] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6]; Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]
CC:
Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Location: ZoomGov (link TBA)
Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang
Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



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Elke Hodson is inviting you to a scheduled ZoomGov meeting.

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SIP:
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Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/22/2021 7:18:56 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Ex. 6] ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6] michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP [Ex. 6] West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Solomon Hsiang [shsiang@berkeley.edu]; Hannah Hess [hhess@rhg.com]; Trevor Houser [tghouser@rhg.com]; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]
CC: Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]; Peters, Erik B. EOP/OMB (Intern) [Ex. 6] kmccusker@rhg.com; inath33 [Ex. 6]
Subject: SC-GHG: Presentation #2 from Climate Impact Lab
Location: [Ex. 6]
Start: 7/29/2021 5:00:00 PM
End: 7/29/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Solomon Hsiang; Hannah Hess; Trevor Houser
Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp; Peters, Erik B. EOP/OMB (Intern); kmccusker@rhg.com; inath33 [Ex. 6]

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their integration tool).

Best,
Elizabeth



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Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/22/2021 7:18:38 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Redacted Ex. 6]; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Redacted Ex. 6]; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Redacted Ex. 6]; caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Redacted Ex. 6]; Hernandez, Rachel C. EOP/OMB [Redacted Ex. 6]; Fenichel, Eli P. EOP/OSTP [Redacted Ex. 6]; michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]; Butry, David T. (Fed) [david.butry@nist.gov]; Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Redacted Ex. 6]; Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]

CC:

Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: [Redacted Ex. 6]

Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
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Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



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 (US East)

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Passcode **Ex. 6**

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Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/14/2021 2:13:13 AM
To: John P Weyant [weyant@stanford.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, Jae [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giorola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6]; Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6]; Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfu.ca]; Kelly Perl [eia-oeceaindustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshawalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxen@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6]; Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mary.zimmerman@dot.gov]
CC: Mark Jaccard [mark_jaccard@sfu.ca]; Chris Bataille [cbataill@gmail.com]; Sandoval, Noah [Noah.Sandoval@nrel.gov]; Perl, Kelly [Kelly.Perl@eia.gov]; Fuhrman, Jay G [jay.fuhrman@pnnl.gov]; Evans, David A [Evans.DavidA@epa.gov]; Ruying Gao [rgao1@stanford.edu]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]
Subject: EMF 37 Working Group Meeting #7
Start: 5/14/2021 4:00:00 PM
End: 5/14/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #7

Time: May 14, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Meeting ID: **Ex. 6**

Password **Ex. 6**

International numbers available:

Ex. 6

Meeting ID: **Ex. 6**

Password **Ex. 6**

SIP: **Ex. 6**

Password **Ex. 6**

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 10/19/2021 1:40:04 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Marten, Alex [Marten.Alex@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Smith, David [Smith.David@epa.gov]; Davis, Wade [Davis.Wade@epa.gov]; Michael Greenstone [mgreenst@uchicago.edu]; Trevor Houser [tghouser@rhc.com]; Sam Anderson [sanderson6@uchicago.edu]
CC: McGartland, Al [McGartland.Al@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; Sol Hsiang [shsiang@berkeley.edu]; robert.kopp@rutgers.edu; Heninger, Brian [Heninger.Brian@epa.gov]; Melissa De Vries [melissade4@uchicago.edu]
Subject: NCEE-CIL discussion re: technical implementation questions on Alpha DSCIM
Location: Microsoft Teams Meeting

Start: 10/21/2021 4:00:00 PM
End: 10/21/2021 5:00:00 PM
Show Time As: Tentative

Required Attendees: Marten, Alex; Parthum, Bryan; Smith, David; Davis, Wade; Michael Greenstone; Trevor Houser; Sam Anderson
Optional Attendees: McGartland, Al; Tan, Tammy; Griffiths, Charles; Sol Hsiang; robert.kopp@rutgers.edu; Heninger, Brian; Melissa De Vries <melissade4@uchicago.edu>

Microsoft Teams meeting

Join on your computer or mobile app

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Or call in (audio only)

Ex. 6 United States, Washington DC

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Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 5/16/2021 5:33:19 PM
To: John P Weyant [weyant@stanford.edu]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, Jae [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giorola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshawalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solanc [Ex. 6] Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mary.zimmerman@dot.gov]; Evans, DavidA [Evans.DavidA@epa.gov]; Ruying Gao [rgao1@stanford.edu]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Kyle, G Page [pkyle@pnnl.gov]; Mark Jaccard [mark_jaccard@sfsu.ca]; Macri, Daniel [macri.daniel@epa.gov]

Subject: EMF 37 Working Group Meeting #8-Beta Round Results Review

Start: 6/11/2021 4:00:00 PM
End: 6/11/2021 7:30:00 PM
Show Time As: Busy

Recurrence: (none)

Topic: EMF 37 Working Group Meeting #8

Time: Jun 11, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

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Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 9/15/2021 8:42:49 PM
To: John P Weyant [weyant@stanford.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giarola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6] Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oeceaindustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6] Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxen@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6] Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [Ex. 6] Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de]

CC:

Subject: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design

Start: 9/27/2021 4:00:00 PM
End: 9/27/2021 5:00:00 PM

Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 September 2021 Full Working Group Meeting-Round #1 Study Design

Time: Sep 27, 2021 09:00 AM Pacific Time (US and Canada)

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Meeting ID **Ex. 6**

Password **Ex. 6**

International numbers available **Ex. 6**

Meeting ID **Ex. 6**

Password **Ex. 6**

SIP: **Ex. 6**

Password **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 10/4/2021 2:26:42 AM
To: John P Weyant [weyant@stanford.edu]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; rbeach@rti.org; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Cai, Yongxia [ycai@rti.org]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; fdelachesnaye@onlocationinc.com; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Evans, DavidA [Evans.DavidA@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ruying Gao [rgao1@stanford.edu]; Ron.Gecan@cbo.gov; Sarah Giordola [s.giordola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Brad Griffin [bradford_griffin@sfsu.ca]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [giovanni.hernandez@epa.gov]; Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [elke.hodson@epa.gov]; Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]; Jaccard, Mark [jaccard@sfsu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kyle, G Page [pkyle@pnnl.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfsu.ca]; Kelly Perl [eia-oceainustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshowalter@onlocationinc.com]; Saulех Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solanç [solanç@cer-rec.gc.ca]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxon [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [wright@cer-rec.gc.ca]; Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mzimmerman@cer-rec.gc.ca];
CC: Macaluso, Nick (ECCC) [Nick.Macaluso@ec.gc.ca]; Leonard Göke [leonardgoeke@tu-berlin.de]; Perl, Kelly [Kelly.Perl@eia.gov]; Friedman, David T. [David.Friedman@eia.gov]; Mark Jaccard [mark_jaccard@sfsu.ca]; Binsted, Matthew T [matthew.binsted@pnnl.gov]; Cunliff, Colin [colin.cunliff@hq.doe.gov]; Aditya Sinha [asinha2@ncsu.edu]; Emma Starke [emma_starke@sfsu.ca]; abarron@smith.edu; Becker, Jon [Jon.Becker@nrel.gov]; Marie Pied [marie@esmia.ca]
Subject: EMF 37 Working Group meeting on clarifying round 1 scenario implementation and assumptions

Start: 11/19/2021 5:00:00 PM

End: 11/19/2021 8:00:00 PM

Show Time As: Tentative

Recurrence: (none)

Topic: EMF 37 Working Group Meeting

Time: Nov 19, 2021 09:00 AM Pacific Time (US and Canada)

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International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/6/2021 11:04:06 AM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Ex. 6] ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6] Fenichel, Eli P. EOP/OSTP [Ex. 6] michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]; Butry, David T. (Fed) [david.butry@nist.gov] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]
CC:
Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: [Ex. 6]
Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Tentative

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang
Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



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H.323: (US West)
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 ID:
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Appointment

From: Kopits, Elizabeth [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=36369CD40CCB428BAECCEC8B2BC3B74B-EKOPITS]
Sent: 10/19/2021 1:40:00 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Marten, Alex [Marten.Alex@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Smith, David [Smith.David@epa.gov]; Davis, Wade [Davis.Wade@epa.gov]; Michael Greenstone [mgreenst@uchicago.edu]; Trevor Houser [tghouser@rhg.com]; Sam Anderson [sanderson6@uchicago.edu]
CC: McGartland, Al [McGartland.Al@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; Sol Hsiang [shsiang@berkeley.edu]; robert.kopp@rutgers.edu; Heninger, Brian [Heninger.Brian@epa.gov]; Melissa De Vries [melissade4@uchicago.edu]
Subject: NCEE-CIL discussion re: technical implementation questions on Alpha DSCIM
Location: Microsoft Teams Meeting
Start: 10/21/2021 4:00:00 PM
End: 10/21/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Marten, Alex; Parthum, Bryan; Smith, David; Davis, Wade; Michael Greenstone; Trevor Houser; Sam Anderson
Optional Attendees: McGartland, Al; Tan, Tammy; Griffiths, Charles; Sol Hsiang; robert.kopp@rutgers.edu; Heninger, Brian; Melissa De Vries <melissade4@uchicago.edu>

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Ex. 6 # United States, Washington DC

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Appointment

From: Kopits, Elizabeth [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=36369CD40CCB428BAECCEC8B2BC3B74B-EKOPITS]
Sent: 6/9/2021 12:55:44 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Rose, Steven [srose@epri.com]
CC: Marten, Alex [Marten.Alex@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]

Subject: Touch base with Steve Rose about EPRI research
Location: Microsoft Teams Meeting

Start: 6/11/2021 7:30:00 PM
End: 6/11/2021 8:00:00 PM
Show Time As: Busy

Required Rose, Steven
Attendees:
Optional Marten, Alex; Parthum, Bryan; McGartland, Al; Fawcett, Allen
Attendees:

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From: Kopits, Elizabeth [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=36369cd40ccb428baeccec8b2bc3b74b-EKOPITS]
Sent: 6/9/2021 12:55:45 PM
To: Rose, Steven [srose@epri.com]
CC: Marten, Alex [Marten.Alex@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]

Subject: Touch base with Steve Rose about EPRI research
Location: Microsoft Teams Meeting

Start: 6/11/2021 7:30:00 PM
End: 6/11/2021 8:00:00 PM
Show Time As: Tentative

Required Rose, Steven
Attendees:
Optional Marten, Alex; Parthum, Bryan; McGartland, Al; Fawcett, Allen
Attendees:

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From: Kopits, Elizabeth [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=36369cd40ccb428baeccec8b2bc3b74b-EKOPITS]
Sent: 6/14/2021 4:52:09 PM
To: Rose, Steven [srose@epri.com]

Subject: Accepted: EPRI SC-GHG Educational Webcast coordination
Location: See WebEx details below

Start: 6/15/2021 6:00:00 PM
End: 6/15/2021 6:30:00 PM
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Appointment

From: Kopits, Elizabeth [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=36369cd40ccb428baeccec8b2bc3b74b-EKOPITS]
Sent: 7/23/2021 5:54:58 PM
To: Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Ex. 6] ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6] Fenichel, Eli P. EOP/OSTP [Ex. 6] michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]
CC: Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]
Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: [Ex. 6]
Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Tentative

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang
Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

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Elizabeth



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Appointment

From: Kopits, Elizabeth [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=36369cd40ccb428baeccec8b2bc3b74b-EKOPITS]
Sent: 10/19/2021 1:40:03 PM
To: Marten, Alex [Marten.Alex@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Smith, David [Smith.David@epa.gov]; Davis, Wade [Davis.Wade@epa.gov]; Michael Greenstone [mgreenst@uchicago.edu]; Trevor Houser [tghouser@rhg.com]; Sam Anderson [sanderson6@uchicago.edu]
CC: McGartland, Al [McGartland.Al@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; Sol Hsiang [shsiang@berkeley.edu]; robert.kopp@rutgers.edu; Heninger, Brian [Heninger.Brian@epa.gov]
Subject: NCEE-CIL discussion re: technical implementation questions on Alpha DSCIM
Location: Microsoft Teams Meeting
Start: 10/21/2021 4:00:00 PM
End: 10/21/2021 5:00:00 PM
Show Time As: Tentative

Required Attendees: Marten, Alex; Parthum, Bryan; Smith, David; Davis, Wade; Michael Greenstone; Trevor Houser; Sam Anderson
Optional Attendees: McGartland, Al; Tan, Tammy; Griffiths, Charles; Sol Hsiang; robert.kopp@rutgers.edu; Heninger, Brian

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Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 6/12/2021 4:14:23 AM
To: Rose, Steven [srose@epri.com]; Marten, Alex [Marten.Alex@epa.gov]; Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Subject: Meeting (ScheduledMeeting)/Thread Id:
19:meeting_Njc4NzM4Y2tNGJjZS00ODk1LWIyNzItNjE4NjE2YjdkZWUx@thread.v2/Communication Id: 0bb61d0e-c9ce-4faf-b0f3-5143123bf871/Rose, Steven, Marten, Alex, Kopits, Elizabeth
Start: 6/11/2021 7:30:20 PM
End: 6/11/2021 8:00:24 PM
Show Time As: Busy

Recurrence: (none)

Required Rose, Steven; Marten, Alex; Kopits, Elizabeth
Attendees:

Start Time (UTC): 6/11/2021 7:30:20 PM

End Time (UTC): 6/11/2021 8:00:24 PM

Duration: 00:30:03.6159598

[6/11/2021 7:31:45 PM (UTC)] srose@epri.com joined.
[6/11/2021 8:00:23 PM (UTC)] srose@epri.com left.
[6/11/2021 7:35:10 PM (UTC)] Marten.Alex@epa.gov joined.
[6/11/2021 7:35:18 PM (UTC)] Marten.Alex@epa.gov left.
[6/11/2021 7:30:20 PM (UTC)] Kopits.Elizabeth@epa.gov joined.
[6/11/2021 8:00:24 PM (UTC)] Kopits.Elizabeth@epa.gov left.

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 1/7/2021 2:41:40 PM
To: Alejandro Sarmiento [asarmiento@diw.de]; Marten, Alex [Marten.Alex@epa.gov]; Amber Mahone [amber@ethree.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Baltazar Solano [Ex. 6] Brown, Maxwell [Maxwell.Brown@nrel.gov]; Lenox, Carol [Lenox.Carol@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Cohen, Stuart [stuart.cohen@nrel.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Dan Shawhan [shawhan@rff.org]; Edmonds, James A (Jae) [jae@pnnl.gov]; Frances Wood [fwood@onlocationinc.com]; Geoff Blanford [gblanford@epri.com]; Giovanni Hernandez [Ex. 6] Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Hafstead, Mark [hafstead@rff.org]; Lalani, Imran [Lalani.Imran@epa.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jeff Amlin [jeffamlin@energy2020.com]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Joe Decarolis [jfdecaro@ncsu.edu]; Jotham Peters [jotham@naviusresearch.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; Nick Macaluso [nick.macaluso@canada.ca]; Trieu Mai [trieu.mai@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Mei Yuan [yuanmei@mit.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Adele Morris [amorris@brookings.edu]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Palmer, Karen [palmer@rff.org]; Peter Wilcoxen [wilcoxen@syr.edu]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Ross, Martin [martin.ross@duke.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Sarah Giorola [s.giorola10@imperial.ac.uk]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sharad Bharadwaj [sharad@ethree.com]; Sharon Showalter [sshowalter@onlocationinc.com]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; Wise, Marshall A [marshall.wise@pnnl.gov]; Woollacott, Jared [jwoollacott@rti.org]; Wright, Evelyn [Ex. 6] Browning, Morgan [browning.morgan@epa.gov]; Mark Jaccard [mark_jaccard@sfu.ca]; Peter Wilcoxen [wilcoxen@maxwell.syr.edu]; Cleary, Kathryn [Cleary@rff.org]

CC:

Subject: EMF 37 Working Group Meeting #3

Start: 1/8/2021 5:00:00 PM
End: 1/8/2021 8:00:00 PM
Show Time As: Tentative

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #3
Time: Jan 8, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

[Ex. 6]

Password: [Ex. 6]

Or iPhone one-tap (US Toll): [Ex. 6]

[Ex. 6]

Or Telephone:

Dial: [Ex. 6] (US, Canada, Caribbean Toll) or [Ex. 6] (US, Canada, Caribbean Toll Free)
Meeting ID: [Ex. 6]

Password: [Ex. 6]

International numbers available: [Ex. 6]

Meeting ID: Ex. 6
Password: Ex. 6
SIP: Ex. 6
Password: Ex. 6

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 3/18/2021 2:55:36 PM
To: Alejandro Sarmiento [asarmiento@diw.de]; Marten, Alex [Marten.Alex@epa.gov]; Amber Mahone [amber@ethree.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Baltazar Solano [solano.baltazar@epa.gov] Ex. 6
Brown, Maxwell [Maxwell.Brown@nrel.gov]; Lenox, Carol [Lenox.Carol@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Cohen, Stuart [stuart.cohen@nrel.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Dan Shawhan [shawhan@rff.org]; Edmonds, Jae [jae@pnnl.gov]; Frances Wood [fwood@onlocationinc.com]; Geoff Blanford [gblanford@epri.com]; Giovanni Hernandez [giovanni.hernandez@epri.com] Ex. 6
Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Hafstead, Mark [hafstead@rff.org]; Lalani, Imran [Lalani.Imran@epa.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jeff Amlin [jeffamlin@energy2020.com]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Joe Decarolis [jfdecaro@ncsu.edu]; Jotham Peters [jotham@naviusresearch.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; Nick Macaluso [nick.macaluso@canada.ca]; Trieu Mai [trieu.mai@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Mei Yuan [yuanmei@mit.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Adele Morris [amorris@brookings.edu]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Palmer, Karen [palmer@rff.org]; Peter Wilcoxen [wilcoxen@syr.edu]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Ross, Martin [martin.ross@duke.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Sarah Giorola [s.giorola10@imperial.ac.uk]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sharad Bharadwaj [sharad@ethree.com]; Sharon Showalter [sshowalter@onlocationinc.com]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; Wise, Marshall A [marshall.wise@pnnl.gov]; Woollacott, Jared [jwoollacott@rti.org]; Wright, Evelyn [ewright@pnnl.gov] Ex. 6
CC: Mark Jaccard [mark_jaccard@sfu.ca]; Destephano, Paelina [Destephano.Paelina@epa.gov]; Peter Wilcoxen [wilcoxen@maxwell.syr.edu]
Subject: REMINDER: EMF 37 Working Group Meeting #6
Start: 4/9/2021 4:00:00 PM
End: 4/9/2021 7:00:00 PM
Show Time As: Tentative

Recurrence: (none)

Appointment

From: Marten, Alex [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BBB5E4745E544893B0AA24FA0167A779-MARTEN, ALEX]
Sent: 6/1/2021 11:56:57 AM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Working Group Meeting #8-Beta Round Results Review
Start: 6/11/2021 4:00:00 PM
End: 6/11/2021 7:30:00 PM
Recurrence: (none)

Appointment

From: Marten, Alex [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BBB5E4745E544893B0AA24FA0167A779-MARTEN, ALEX]
Sent: 2/5/2021 1:39:53 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Working Group Meeting #5
Start: 3/12/2021 5:00:00 PM
End: 3/12/2021 8:00:00 PM
Recurrence: (none)

Appointment

From: Marten, Alex [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BBB5E4745E544893B0AA24FA0167A779-MARTEN, ALEX]
Sent: 2/5/2021 1:40:04 PM
To: John P Weyant [weyant@stanford.edu]
Subject: Accepted: EMF 37 Working Group Meeting #6
Start: 4/9/2021 4:00:00 PM
End: 4/9/2021 7:00:00 PM
Recurrence: (none)

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/6/2021 11:09:45 AM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6 caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6 Hernandez, Rachel C. EOP/OMB [Ex. 6 michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP [Ex. 6 West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Solomon Hsiang [shsiang@berkeley.edu]; Hannah Hess [hhess@rhg.com]; Trevor Houser [tghouser@rhg.com]; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6 Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]; Peters, Erik B. EOP/OMB (Intern) [Ex. 6 kmccusker@rhg.com; inath33 [Ex. 6]

Subject: SC-GHG: Presentation #2 from Climate Impact Lab
Location: [Ex. 6]

Start: 7/29/2021 5:00:00 PM
End: 7/29/2021 6:00:00 PM
Show Time As: Tentative

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Solomon Hsiang; Hannah Hess; Trevor Houser

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp; Peters, Erik B. EOP/OMB (Intern); kmccusker@rhg.com; inath33 [Ex. 6]

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their integration tool).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US: **Ex. 6**

mobile: **Ex. 6**

Meeting **Ex. 6**

URL:

Meeting ID: **Ex. 6**

ID:

Passcode: **Ex. 6**

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US: **Ex. 6**

Meeting **Ex. 6**

ID:

Passcode: **Ex. 6**

International numbers

Join from an H.323/SIP room system

H.323: **Ex. 6** (US West)
(US East)

Meeting **Ex. 6**

ID:

Passcode: **Ex. 6**

SIP: **Ex. 6**

Passcode: **Ex. 6**

Appointment

From: auffhammer@berkeley.edu [auffhammer@berkeley.edu]
Sent: 10/1/2021 7:47:44 PM
To: auffhammer@berkeley.edu; Lau, Peiley [Lau.Peiley@epa.gov]

Subject: Peiley Lau and Maximilian Auffhammer
Attachments: invite.ics

Location: Ex. 6

Start: 10/15/2021 11:00:00 PM
End: 10/15/2021 11:30:00 PM

Show Time As: Busy

Recurrence: (none)

You have been invited to the following event.

Peiley Lau and Maximilian Auffhammer

When Fri Oct 15, 2021 4pm – 4:30pm Pacific Time - Los Angeles

Where Ex. 6

Calendar lau.peiley@epa.gov

Who
• auffhammer@berkeley.edu - organizer
• lau.peiley@epa.gov

more details »

Event Name: 30 Minute Meeting

Location: This is a Zoom web conference.

You can join this meeting from your computer, tablet, or smartphone.

Ex. 6

One tap mobile:

Ex. 6

You can also dial in using your phone.

US: Ex. 6

Ex. 6

Meeting ID: Ex. 6

Find your local number: <https://berkeley.zoom.us/u/abnKgn5HYG>

Please share anything that will help prepare for our meeting.: Hi Max, great presentation today, and was great to see you! I'm putting this time on your calendar - but let me know if you'd prefer a shorter time period/different date & time. Look forward to chatting!

Need to make changes to this event?

Cancel: <https://calendly.com/cancellations/EMIBASIH5IJJE533>

Reschedule: <https://calendly.com/reschedulings/EMIBASIH5IJJE533>

Powered by Calendly.com

Going (lau.pelley@epa.gov)? [Yes](#) - [Maybe](#) - [No](#) [more options »](#)

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account lau.pelley@epa.gov because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://calendar.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to send a response to the organizer and be added to the guest list, or invite others regardless of their own invitation status, or to modify your RSVP. [Learn More](#).

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 4/16/2021 5:00:05 AM
To: John P Weyant [weyant@stanford.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Jeff Amlin [jeffamlin@energy2020.com]; Arent, Doug [Doug.Arent@nrel.gov]; Asudegi, Mona (FHWA) [mona.asudegi@dot.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Christopher Bataille [chris.bataille@iddri.org]; Jose Benitez [jose.benitez@hq.doe.gov]; Sharad Bharadwaj [sharad@ethree.com]; Johnn Bistline [jbistline@epri.com]; Geoff Blanford [gblanford@epri.com]; Gale Boyd [gale.boyd@duke.edu]; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Browning, Morgan [browning.morgan@epa.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Cohen, Stuart [stuart.cohen@nrel.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Joe Decarolis [jfdecaro@ncsu.edu]; Delforge, Pierre [pdelforge@nrdc.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Edmonds, Jae [jae@pnnl.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Ron.Gecan@cbo.gov; Sarah Giorola [s.giorola10@imperial.ac.uk]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Grundler, Christopher [grundler.christopher@epa.gov]; Hafstead, Mark [hafstead@rff.org]; Elaine Hale [elaine.hale@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Chioke Harris [chioke.harris@nrel.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Giovanni Hernandez [Ex. 6] Whitney Herndon [wjherndon@rhg.com]; Elke Hodson [Ex. 6]; Jeffrey Hoffmann [jeffrey.hoffmann@hq.doe.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; njohnson@epri.com; Kanudia, Amit [amit@kanors.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; Jared Langevin [jared.langevin@lbl.gov]; Ben Leibowicz [bleibowicz@utexas.edu]; Lenox, Carol [Lenox.Carol@epa.gov]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Lochner, Ellie N [ellie.lochner@pnnl.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Nick Macaluso [nick.macaluso@canada.ca]; Amber Mahone [amber@ethree.com]; Trieu Mai [trieu.mai@nrel.gov]; Dylan Manning [dylan.manning@campus.tu-berlin.de]; Maples, John [john.maples@eia.gov]; Marten, Alex [Marten.Alex@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; McFarland, James [McFarland.James@epa.gov]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; McMillan, Colin [colin.mcmillan@nrel.gov]; Marc Melaina [marc.melaina@ee.doe.gov]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Adele Morris [amorris@brookings.edu]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Muratori, Matteo [Matteo.Muratori@nrel.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Palmer, Karen [palmer@rff.org]; Aaron Pardy [apardy@sfu.ca]; Kelly Perl [eia-oeceaindustrialteam@eia.gov]; Jotham Peters [jotham@naviusresearch.com]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Ross, Martin [martin.ross@duke.edu]; Charles Rossmann [cgrossma@southernco.com]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Dan Shawhan [shawhan@rff.org]; Shelby, Michael [Shelby.Michael@epa.gov]; Shin, Dave [shind@api.org]; Sharon Showalter [sshawalter@onlocationinc.com]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Baltazar Solano [Ex. 6]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Steve Suryan [steve.suryan@chevron.com]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Turnure, James [James.Turnure@eia.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Peter Wilcoxen [wilcoxon@syr.edu]; Tom Wilson [twilson@epri.com]; Wise, Marshall A [marshall.wise@pnnl.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Frances Wood [fwood@onlocationinc.com]; Woollacott, Jared [jwoollacott@rti.org]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Wright, Evelyn [Ex. 6]; Sha Yu [sha.yu@pnnl.gov]; Mei Yuan [yuanmei@mit.edu]; Mary Zimmerman [mary.zimmerman@dot.gov]
CC: Mark Jaccard [mark_jaccard@sfu.ca]; Chris Bataille [Ex. 6]; Sandoval, Noah [Noah.Sandoval@nrel.gov]; Perl, Kelly [Kelly.Perl@eia.gov]; Fuhrman, Jay G [jay.fuhrman@pnnl.gov]; Evans, David A [Evans.DavidA@epa.gov]; Ruying Gao [rgao1@stanford.edu]; Aaron Hoyle [aaron.hoyle@cer-rec.gc.ca]
Subject: EMF 37 Working Group Meeting #7
Start: 5/14/2021 4:00:00 PM
End: 5/14/2021 7:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #7

Time: May 14, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial **Ex. 6** 9 (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID **Ex. 6**

Password **Ex. 6**

International numbers available

Ex. 6

Meeting ID **Ex. 6**

Password **Ex. 6**

SIP **Ex. 6**

Password **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 3/9/2021 2:36:19 PM
To: John P Weyant [weyant@stanford.edu]; Browning, Morgan [browning.morgan@epa.gov]; Alejandro Sarmiento [asarmiento@diw.de]; Marten, Alex [Marten.Alex@epa.gov]; Amber Mahone [amber@ethree.com]; Anahi Molar-Cruz [anahi.molar-cruz@tum.de]; Schreiber, Andrew [schreiber.andrew@epa.gov]; Wolverton, Ann [Wolverton.Ann@epa.gov]; Baltazar Solano [REDACTED] Ex. 6; Brown, Maxwell [Maxwell.Brown@nrel.gov]; Lenox, Carol [Lenox.Carol@epa.gov]; Charalampos Avraam [cavraam1@jhu.edu]; Christian von hirschhausen [cvh@wip.tu-berlin.de]; Cohen, Stuart [stuart.cohen@nrel.gov]; Loughlin, Dan [Loughlin.Dan@epa.gov]; Dan Shawhan [shawhan@rff.org]; Edmonds, James A (Jae) [jae@pnnl.gov]; Frances Wood [fwood@onlocationinc.com]; Geoff Blanford [gblanford@epri.com]; Giovanni Hernandez [exergiovanni@gmail.com]; Goettle, Dick [r.goettle@neu.edu]; Göke, Leonard [leonard.goeke@tu-berlin.de]; Hafstead, Mark [hafstead@rff.org]; Lalani, Imran [Lalani.Imran@epa.gov]; Jaccard, Mark [jaccard@sfu.ca]; Jeff Amlin [jeffamlin@energy2020.com]; Jefferson Riera [jefferson.riera@kaust.edu.sa]; Joe Decarolis [jfdecaro@ncsu.edu]; Jotham Peters [jotham@naviusresearch.com]; Kaplan, Ozge [Kaplan.Ozge@epa.gov]; Kathleen Vaillancourt [kathleen@esmia.ca]; Nick Macaluso [nick.macaluso@canada.ca]; Trieu Mai [trieu.mai@nrel.gov]; Matthew Hansen [Matthew.Hansen@cer-rec.gc.ca]; Mei Yuan [yuanmei@mit.edu]; Adamantiades, Mikhail [Adamantiades.Mikhail@epa.gov]; Adele Morris [amorris@brookings.edu]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Olivier Bahn [olivier.bahn@gerad.ca]; Palmer, Karen [palmer@rff.org]; Peter Wilcoxon [wilcoxon@syr.edu]; Ren Orans [ren@ethree.com]; Robbie Orvis [robbie@energyinnovation.org]; Ross, Martin [martin.ross@duke.edu]; Sims, Ryan [Sims.Ryan@epa.gov]; Sands, Ron - ERS [rsands@ers.usda.gov]; Sarah Giorola [s.giorola10@imperial.ac.uk]; Sauleh Siddiqui [siddiqui@jhu.edu]; Sharad Bharadwaj [sharad@ethree.com]; Sharon Showalter [sshowalter@onlocationinc.com]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Tuladhar, Sugandha [sugandha.tuladhar@nera.com]; Warwick McKibbin [warwick.mckibbin@anu.edu.au]; Wise, Marshall A [marshall.wise@pnnl.gov]; Woollacott, Jared [jwoollacott@rti.org]; Wright, Evelyn [REDACTED] Ex. 6

Subject: EMF 37 Working Group Meeting #5

Start: 3/12/2021 5:00:00 PM
End: 3/12/2021 8:00:00 PM
Show Time As: Busy

-----Original Appointment-----

From: John P Weyant <weyant@stanford.edu>
Sent: Friday, December 18, 2020 5:22 PM
To: John P Weyant; Alejandro Sarmiento; Marten, Alex; Amber Mahone; Anahi Molar-Cruz; Schreiber, Andrew; Wolverton, Ann; Baltazar Solano ; Brown, Maxwell; Lenox, Carol; Charalampos Avraam ; Christian von hirschhausen; Cohen, Stuart; Loughlin, Dan; Dan Shawhan; Edmonds, James A (Jae); Frances Wood; Geoff Blanford; Giovanni Hernandez ; Goettle, Dick; Göke, Leonard; Hafstead, Mark; Lalani, Imran; Jaccard, Mark; Jeff Amlin; Jefferson Riera; Joe Decarolis; Jotham Peters; Kaplan, Ozge; Kathleen Vaillancourt; Nick Macaluso; Trieu Mai; Matthew Hansen; Mei Yuan; Adamantiades, Mikhail; Adele Morris; Nadejda Victor; Nichols, Christopher J.; Olivier Bahn; Palmer, Karen; Peter Wilcoxon; Ren Orans; Robbie Orvis; Ross, Martin; Sims, Ryan; Sands, Ron - ERS; Sarah Giorola; Sauleh Siddiqui; Sharad Bharadwaj; Sharon Showalter; Stenhouse, Jeb; Tuladhar, Sugandha; Warwick McKibbin; Wise, Marshall A; Woollacott, Jared; Wright, Evelyn

Subject: EMF 37 Working Group Meeting #5

When: Friday, March 12, 2021 9:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where:

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 1/7/2021 2:47:19 PM
To: John P Weyant [weyant@stanford.edu]; Danielle Koren [danielle.koren@hq.doe.gov]; Edmonds, James A (Jae) [jae@pnnl.gov]; Frances Wood [fwood@onlocationinc.com]; Nadejda Victor [nadejda.victor@netl.doe.gov]; Nichols, Christopher J. [christopher.nichols@netl.doe.gov]; Sha Yu [sha.yu@pnnl.gov]; Sharon Showalter [sshowalter@onlocationinc.com]; Waldhoff, Stephanie T [Stephanie.Waldhoff@pnnl.gov]; Crisostomo, Noel@Energy [Noel.Crisostomo@energy.ca.gov]; Geoffrey Morrison [geoffrey.morrison@cadmusgroup.com]; Maples, John [john.maples@eia.gov]; Kara Podkaminer [kara.podkaminer@ee.doe.gov]; Lewis Fulton [lmfulton@ucdavis.edu]; Lie, Sharyn [Lie.Sharyn@epa.gov]; Mary Zimmerman [mary.zimmerman@dot.gov]; Matteo Muratori [matteo.muratori@nrel.gov]; Christopher Bataille [chris.bataille@iddri.org]; Dutrow, Elizabeth [Dutrow.Elizabeth@epa.gov]; Eric Masanet [eric.masanet@northwestern.edu]; Gale Boyd [gale.boyd@duke.edu]; Kelly Perl [eia-oceainustrialteam@eia.gov]; Wolfgang Eichhammer [wolfgang.eichhammer@isi.fraunhofer.de]; Worrell, E. (Ernst) [E.Worrell@uu.nl]; Chioke Harris [chioke.harris@nrel.gov]; Delforge, Pierre [pdelforge@nrdc.org]; Elaine Hale [elaine.hale@nrel.gov]; Janet Reyna [janet.reyna@nrel.gov]; Jared Langevin [jared.langevin@lbl.gov]; Bryson, Joe [Bryson.Joe@epa.gov]; Jarzomski, Kevin [kevin.jarzomski@eia.gov]; Michael Henchen [mhenchen@office365stanford.onmicrosoft.com]; Browning, Morgan [browning.morgan@epa.gov]
Subject: EMF 37 Working Group Meeting #3
Start: 1/8/2021 5:00:00 PM
End: 1/8/2021 8:00:00 PM
Show Time As: Busy

Recurrence: (none)

john weyant is inviting you to a scheduled Zoom meeting.

Topic: EMF 37 Working Group Meeting #3
Time: Jan 8, 2021 09:00 AM Pacific Time (US and Canada)

Join from PC, Mac, Linux, iOS or Android:

Ex. 6

Password: **Ex. 6**

Or iPhone one-tap (US Toll):

Ex. 6

Or Telephone:

Dial: **Ex. 6** (US, Canada, Caribbean Toll) or **Ex. 6** (US, Canada, Caribbean Toll Free)

Meeting ID: **Ex. 6**

Password: **Ex. 6**

International numbers available: **Ex. 6**

Meeting ID: **Ex. 6**

Password: **Ex. 6**

SIP: **Ex. 6**

Password: **Ex. 6**

Appointment

From: John P Weyant [weyant@stanford.edu]
Sent: 3/3/2021 8:47:50 PM
To: John P Weyant [weyant@stanford.edu]; Creason, Jared [Creason.Jared@epa.gov]; Geoff Blanford [gblanford@epri.com]; Fawcett, Allen [Fawcett.Allen@epa.gov]; McFarland, James [McFarland.James@epa.gov]; Trieu Mai [trieu.mai@nrel.gov]; Kanudia, Amit [amit@kanors.com]; Marc Melaina [marc.melaina@ee.doe.gov]; Neha Rustagi [neha.rustagi@ee.doe.gov]; Whitney Herndon [wjherndon@rhg.com]; Wright, Evelyn [Ex. 6] Charles Rossmann [cgrossma@southernco.com]; Mignone, Bryan [bryan.k.mignone@exxonmobil.com]; Shin, Dave [shind@api.org]; Steve Suryan [steve.suryan@chevron.com]; abarron@smith.edu; Ben Leibowicz [bleibowicz@utexas.edu]; Johnn Bistline [jbistline@epri.com]; Elke Hodson [Ex. 6] Shelby, Michael [Shelby.Michael@epa.gov]; VAN RUIJVEN Bastiaan [vruijven@iiasa.ac.at]; Turnure, James [James.Turnure@eia.gov]; Arent, Doug [Doug.Arent@nrel.gov]; Bryce VanSluys [bryce.vansluys@cer-rec.gc.ca]; Carla Frisch [cfrisch@rmi.org]; Grundler, Christopher [grundler.christopher@epa.gov]; Jose Benitez [jose.benitez@hq.doe.gov]; Tom Wilson [twilson@epri.com]
Subject: EMF 37 Working Group Meeting #5
Start: 3/12/2021 5:00:00 PM
End: 3/12/2021 8:00:00 PM
Show Time As: Busy

-----Original Appointment-----

From: John P Weyant <weyant@stanford.edu>
Sent: Friday, December 18, 2020 5:35 PM
To: John P Weyant; Geoff Blanford; Fawcett, Allen; McFarland, James; Trieu Mai; Kanudia, Amit; Marc Melaina; Neha Rustagi; Whitney Herndon; Wright, Evelyn; Charles Rossmann; Mignone, Bryan; Shin, Dave; Steve Suryan; abarron@smith.edu; Ben Leibowicz; Johnn Bistline; Elke Hodson; Shelby, Michael; VAN RUIJVEN Bastiaan; Turnure, James; Arent, Doug; Bryce VanSluys; Carla Frisch; Grundler, Christopher; Jose Benitez; Tom Wilson
Subject: EMF 37 Working Group Meeting #5
When: Friday, March 12, 2021 9:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where:

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/21/2021 12:37:57 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Butry, David T. (Fed) [david.butry@nist.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6]; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP [Ex. 6] West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Solomon Hsiang [shsiang@berkeley.edu]; Hannah Hess [hhess@rhg.com]; Trevor Houser [tghouser@rhg.com]; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]; Peters, Erik B. EOP/OMB (Intern) [Ex. 6] kmccusker@rhg.com; inath33 [Ex. 6]

CC:

Subject: SC-GHG: Presentation #2 from Climate Impact Lab
Location: [Ex. 6]

Start: 7/29/2021 5:00:00 PM
End: 7/29/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; michael.d.smith@noaa.gov; Fenichel, Eli P. EOP/OSTP; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Solomon Hsiang; Hannah Hess; Trevor Houser

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp; Peters, Erik B. EOP/OMB (Intern); kmccusker@rhg.com; inath33 [Ex. 6]

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their integration tool).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US:
mobile:
Meeting
URL:
Meeting ID:
Passcode

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US:
Meeting
ID:
Passcode

International numbers

Join from an H.323/SIP room system

H.323: (US West)
 (US East)
Meeting
ID:
Passcode
SIP:
Passcode

Appointment

From: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]
Sent: 7/21/2021 12:37:38 PM
To: Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Parthum, Bryan [Parthum.Bryan@epa.gov]; Martinich, Jeremy [Martinich.Jeremy@epa.gov]; Kaufman, Noah EOP/CEA [Ex. 6]; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB [Ex. 6] Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE) [Scott.Douglas@HHS.GOV]; Timothy, Darren (OST) [Darren.Timothy@dot.gov]; Michael Greenstone [mgreenst@uchicago.edu]; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M [Benjamin_Simon@ios.doi.gov]; Thomas, Amanda L. EOP/OMB [Ex. 6] caspurlock [CASpurlock@lbl.gov]; Kearsley, Aaron (OS/ASPE) [Aaron.Kearsley@hhs.gov]; Pickrell, Don H (Volpe) [Don.Pickrell@dot.gov]; Sutton-Grier, Ariana E. EOP/OMB [Ex. 6] Hernandez, Rachel C. EOP/OMB [Ex. 6] Fenichel, Eli P. EOP/OSTP [Ex. 6] michael.d.smith@noaa.gov; West, Tristram [tristram.west@science.doe.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Christian_crowley@ios.doi.gov; Hannah Hess [hhess@rhg.com]; Solomon Hsiang [shsiang@berkeley.edu]; Butry, David T. (Fed) [david.butry@nist.gov] Marten, Alex [Marten.Alex@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Smith, David [Smith.David@epa.gov]; Tan, Tammy [Tan.Tammy@epa.gov]; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB [Ex. 6] Hoagland, Christopher [Hoagland.Christopher@epa.gov]; Robert Kopp [robert.kopp@rutgers.edu]

CC:

Subject: SC-GHG: Presentation #1 from Climate Impact Lab
Attachments: CIL_IWG_Presentation_23July2021_Sharing.pdf
Location: [Ex. 6]

Start: 7/23/2021 6:00:00 PM
End: 7/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Parthum, Bryan; Martinich, Jeremy; Kaufman, Noah EOP/CEA; ben.deangelo@noaa.gov; Hodson Marten, Elke L. EOP/OMB; Catherine.Wolfram@treasury.gov; Kristin_skrabis@ios.doi.gov; Peter.Feather@usda.gov; Douglas, Scott (HHS/ASPE); Timothy, Darren (OST); Butry, David T. (Fed); Michael Greenstone; christopher.lauer@noaa.gov; heather.evans@nist.gov; Simon, Benjamin M; Thomas, Amanda L. EOP/OMB; CASpurlock@lbl.gov; Kearsley, Aaron (OS/ASPE); Pickrell, Don H (Volpe); Sutton-Grier, Ariana E. EOP/OMB; Hernandez, Rachel C. EOP/OMB; Fenichel, Eli P. EOP/OSTP; michael.d.smith@noaa.gov; tristram.west@science.doe.gov; Sarofim, Marcus; Hartin, Corinne; Christian_crowley@ios.doi.gov; Hannah Hess; Solomon Hsiang

Optional Attendees: Marten, Alex; Griffiths, Charles; McGartland, Al; Fawcett, Allen; Smith, David; Tan, Tammy; vreicher@uchicago.edu; Steiner, Christopher P. EOP/OMB; Hoagland, Christopher; Robert Kopp

Dear SC-GHG Technical Workgroup members,

I hope you can join for presentation #1 from the Climate Impact Lab (overview of their methodology).

Best,
Elizabeth



Hi there,

Elke Hodson is inviting you to a scheduled ZoomGov meeting.

Join Zoom Meeting

One tap US: **Ex. 6**

mobile: **Ex. 6**

Meeting **Ex. 6**

URL:

Meeting **Ex. 6**

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Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US: **Ex. 6**

Meeting **Ex. 6**

ID:

Passcode: **Ex. 6**

International numbers

Join from an H.323/SIP room system

H.323: **Ex. 6** (US West)
(US East)

Meeting **Ex. 6**

ID:

Passcode: **Ex. 6**

SIP: **Ex. 6**

Passcode: **Ex. 6**